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No. 14.

RESUMES FAST MEAT SERVICE.

The Rock Island Railroad has announced the resumption of its 24-hour service from Omaha to Chicago on meats. This fast service was abandoned about a year ago, but other lines maintained the practice and the Rock Island has again fallen into line.

SWIFT'S MANY STOCKHOLDERS.

Swift & Company's stockholders now number over 6,000. The recent increase of capital stock has been distributed so widely that the number of stockholders has increased about 2,000. This would appear to indicate general confidence in this packing house concern as a safe investment, as well as the development of Swift & Company as a co-operative enterprise open to all investors.

NO SYMPATHY IN TEXAS.

The stock raisers of Texas are giving the independent packing plant scheme very little encouragement. The cattlemen in that section do not seem to feel much interest in the independent packing house proposition. A man who spent several days talking with the leading cowmen of that section, finds an apathy toward the plans of the promoters of the independent project that does not promise much encouragement for the future. The truth of the business is that the ranchmen of west Texas as a general thing have enough troubles of their own closer home to keep them from feeling lonesome. They say the independent packing house scheme is a good one if it can be made to go, but they are not willing to put up any money on the proposition.

RECEIVERS FOR JARVIS COMPANY.

John W. Hardenbergh and Palmer Campbell have been appointed by Vice-Chancellor Stevenson, at Jersey City, as receivers for the Jarvis Terminal Cold Storage Company of Jersey City. Henry Lembeck, who made the application, alleged that the company was insolvent. He holds fifty shares of the capital stock. The debts, he said, were \$76,000, of which \$40,000 is in mechanics' liens against a new building recently put up by the company. The assets, consisting of land and buildings, are valued at \$356,000.

Vice-Chancellor Stevenson said the affidavits showed that the company had been obliged to borrow \$100 with which to purchase coal. He regarded that as an evidence of bad management. All the money had been spent on the plant, he said, reserving nothing for working capital. It is expected that the company's difficulties will soon be cleared away, however.

NO NEW PURE FOOD LAW

It is unlikely that Congress will pass either the Hepburn or the McCumber Pure Food bills at the present session. It is the administration policy to finish the necessary legislation, such as the appropriation bills, and adjourn as soon as possible, in view of the approaching Presidential campaign. Besides, it

seems to be pretty generally realized that both the bills now before Congress represent the ideas of pure food extremists rather than the food-consuming public, and though the cranks are loudly howling for the adoption of their "isms," a realization of their hopes is unlikely at this time.

OPTION ON THE DOLD PLANT

The National Provisioner has stated that the Dold plant at Kansas City had not been sold to the Independent Packing Company, in spite of the quoted statement of the vice-president of the Independent Company that such a sale had been made. A modification of the report comes from Denver, Colo. It is to the effect that the Independent Pack-

ing Company has taken an option on a ten-year lease of the plant, but that the option has not yet been taken up. The Kansas City plant has a daily capacity of 2,000 cattle, 4,000 hogs and 4,000 sheep when in trim. It has not been running since its partial destruction by fire two or three years ago. There the matter rests.

NEW S. & S. PLANT FOR BOSTON

The Schwarzschild & Sulzberger Company will establish a big rendering plant in South Boston. This decision was arrived at last week, after officers of the company had made a visit to New England and looked over the ground. It was decided that the field was a promising one for such an enterprise and that it would prove a profitable extension of the already immense S. & S. business. Work will begin at once.

New England retail dealers, members of the New England Produce & Provision Dealers' Association, are said to have interested the S. & S. Company in this direction. They were anxious for competition for their scrap suet,

bones and tallow, and were willing to make contracts to deliver enough of this material to keep a new plant busy all the time. The plant will be an extensive one. Plans have not yet been passed on for the buildings, but the work is being pushed forward, and it is stated that no time will be lost in putting through the enterprise and getting it in working order.

The company has offers of several buildings in South Boston suitable for the purpose, and of sites for an entirely new plant. The decision to remodel or build will be made in a few days. In the meantime the company is taking care of its new contracts with the retailers, and collections began yesterday.

BUTCHERS SAY MEAT IS LOWER

The leading retailers in New York city and elsewhere over the East, in Philadelphia, Boston, Buffalo, Washington, etc., declare there has been no rise in beef prices during this and the past week. In fact, meat is generally lower. The competition for a few extra prime carcasses made them sell relatively higher than other meats, or even higher than they would if there had not been an extra demand for such stuff.

Butchers state that the fine grade of beef which characterized 1902 is not plentiful. The independent city slaughterers all over the East say that they have much difficulty in buying prime native steers, because comparatively few of them have been finished this past season. The average grade of beef is down, the retailers say, and the butchers have had the best year they have experienced in five years. The butcher with the exclusive trade

has the hardest time, because he cannot get his kind of stuff for his people. These customers have, in many instances, gone to the other butchers. It is to keep this trade that causes that scuffle for the little really prime meat that is in the market. They are looking for the real corn-fed and corn-finished stuff.

Leading butchers state that retail meat is 10 to 20 per cent. lower than it was in 1902. Wholesale, it is 40 per cent. lower. But, then, the retailer sold his beef too low in 1902. If he had put the price where it ought to have been, his price also would now be 40 per cent. lower than they were then. Pork has also ruled lower in the retail market. Lent is partly responsible for this. Carcass hogs are a bit cheaper, though. The retail butchers do not understand why the facts should be misrepresented in the public press. It hurts them.

Perhaps You Have a Doubt

Are skeptical about this matter of electric drive, which enjoys the favor of the discerning

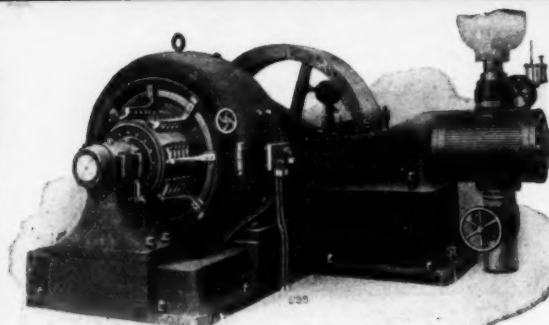
We would like to hear your doubts, feel certain that a recital of

THE GOODNESS OF NORTHERN APPARATUS WILL DISPELL DOUBT

Generator Bulletin, No. 2230

Northern Electrical Mfg. Co., Madison, Wis., U.S.A.

ENGINEERS MANUFACTURERS



Northern Generator-Ames Engine.

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A TEMPEST IN AN INK-POT

The ways of modern sensational journalism had apt illustration last week in the uproar raised by the majority of the daily papers over a purely mythical increase in the wholesale price of dressed beef. The occurrence revealed the "hearsay" habits of news-gathering into which even reputable papers have drifted, as well as the methods of deliberate misrepresentation pursued by the "yellow" press. It also served to show the dangerous extent to which the reading public, dependent upon the daily press for its information concerning current events, may be misled by false statements persistently repeated with a pretense of truth.

The story of the increase in beef prices originated—as might have been expected—in that mother of all "yellow" journals, the chief organ of a man who aspires to a presidential nomination by demagogic posing as the "champion of the people." A rumor of a fractional rise in beef, wafted over from Philadelphia, was ample excuse for the newspaper staff which had standing instructions to "make copy out of the packers" on any provocation. It was easy work, for the cardinal principle of sensational journalism is not "Get the facts," but rather "Get a story," facts or no facts. So the "yellow" paper made the "story," which was but another ringing of the changes on the time-worn theme of a "packers' combination" to squeeze the purses of the meat-eating public.

Other newspapers—the reputable press as well as the imitators of the "only original yellow"—swallowed the bait, hook, line and sinker. There was a veritable epidemic of flaring headlines, some in red, most in black. The contagion spread beyond New York, and the public of the smaller cities whose papers exchanged with the metropolitan dailies were made to shake in their shoes over the suggested alternative of vegetarianism or bankruptcy. There is no doubt that a large majority of newspaper readers sincerely believed that the price of beef at wholesale had actually been "boosted," and it is not without the range of probability that the shrewd retail butcher took more or less advantage of the situation.

As a matter of fact there has been no increase in wholesale beef prices. The story was made out of whole cloth. Telegraphed to Chicago, it was refuted in detail by Louis F. Swift and other chiefs of the packinghouse

industry. One of the chief officials of Armour & Company's beef department is authority for the statement that wholesale dressed beef is as low as at any time within the past five years, and that there has been no particular change in prices for three months. Dressed beef is actually 15 cents per hundred cheaper than it was in January. The figures on the packers' sales books cut the ground from under the newspaper fiction of last week, and the books are open to examination for the purpose of establishing the actual facts in the matter.

"There is no foundation at all for the talk that is going on about high meat prices and increases in the wholesale cost of dressed beef," says F. J. Stolz, one of Armour & Company's Eastern representatives. "There have been columns of rash statements printed, but they are disproven by the actual figures of market transactions as they appear on the books. Dressed beef is selling at as low a figure as at any time within the last five years. There has been a slight decline in the market each week for the past three months.

Facts from the Books.

"Contrary to reports, there was no increase in the price of beef last week. On the other hand, for the week ending last Saturday, March 26, Armour & Company sold in Greater New York 10,000 quarters of beef at an average price of \$6.85 per hundred pounds. The freight on dressed beef from Chicago to New York is 45 cents per 100 pounds. In June, 1902, the same grade of beef sold in Chicago for \$8.81 per hundred pounds. The price has been going down ever since. It is 15 cents per hundred lower right now than it was in January.

"The figures show that there has been a decline in meat prices to correspond with the decline in price of cattle. The selling price of beef depends on the cost of cattle. There are several factors which govern the cattle market. There is the law of supply and demand, and there is the weather, which affects the run of cattle to market. But the chief element in regulating prices is the quality of the stock. From August to November the supply is chiefly grass-fed stock, which makes a poorer quality of meat than grain or corn-fed, and, consequently, prices are lower. From December to the end of summer the market is supplied largely with the corn-fed animal,

which furnishes the choicest beef and brings the top prices.

"Consequently at this time of year slight fluctuations in the market may be expected, due to the influx of corn-fed stock, and to the high price of the feed, which makes higher cattle, and hence higher meat. But it is the rule that this seasonable increase is limited, as regards the price of the dressed product, almost entirely to the prime grades of meat which are demanded by a particular and limited trade, such as hotels, steamship companies, etc. This special trade absorbs the increases, and they are not noticed on the general market. As a matter of fact, most of this meat is contracted for direct by the big consumers, and does not affect the local butcher's business.

"Contrary to general belief, there is no arbitrary plan of fixing prices. The prices asked by the wholesalers depend on a very simple mathematical calculation, and are always arrived at in the same way. Beginning with the actual cost of the live cattle, the killing expense is computed, and an allowance made for shrinkage between live and dressed weight. Experience has proven that this shrinkage amounts to from 40 to 50 per cent. in slaughtering and dressing. This leaves the narrowest sort of a margin for the packer, and he must depend on the economical disposition of the residue of the animal—hide, bones, fat, hair, blood, horns, etc.—for the profit in his business. It is the perfection in development to which these branches of the business have been brought that has made present low beef prices possible.

"Let me repeat, with all due respect to plain statements of facts, that the price of beef has not been increased, and that beef is selling as low as at any time within the past five years. This includes the abnormally low period previous to 1902, as well as the high-price era of that year."

A NICE DIVIDEND.

At the annual meeting of the stockholders of the Cotton Plant Oil Mill Company, at Memphis, Tenn., the following new officers and directors were elected: R. R. James, president; A. C. Carter, vice-president; F. H. Kennedy, secretary; Dr. L. B. Moore, treasurer; W. T. Brice, Charles Meehan and D. E. Moore. A dividend of 18 per cent. was declared, 10 per cent. being paid to the stockholders and 8 per cent. to go to the surplus fund.

MEAT LIBELS AIRED IN GERMANY

People usually smile and say "Rot!" when a layman gives vent to a professional opinion or begins dogmatically to dilate upon matters about which he knows little or nothing. The National Provisioner has received a copy of an article by the agricultural expert of the German Imperial Consulate General, Mr. Scherk, in San Francisco, Cal. The Cologne Gazette, the official organ of the German Agrarians, has published the "facts" contained in this clumsy report. The National Provisioner takes note of it in order that the real facts may be read on the other side of the Atlantic. The article in question is entitled "The 'Meat Trust' in the United States of America." Take its statements seriatim. Mr. Scherk says:

"It appears that the cattle breeders in the United States gave up all hope of receiving protection from the present administration against the meat trust. They have, therefore, resolved to invest \$5,000,000 in abattoirs and distributing houses of their own."

The Independent Packing Company—the contemplated slaughter end of the National Livestock Association—is incorporated with \$5,000,000 capital. It will take that sum to build and operate one packing house, which will kill about 500 cattle, 1,000 hogs and 2,000 sheep daily. A general distributive meat plant must have six weeks' supply of live stock for meat in transit outwards, in the cooler, on the killing floor, in the pens, on the road to the factory, or somewhere in sight to keep its output moving regularly from the refrigerators into the channels of trade. So a \$5,000,000 plant would simply be a "fleabite," or a business experiment.

Aim of the Stockmen.

The purpose of the stockmen is, like that of the Agrarians, to force up the price of live stock regardless of the market price of meat. The average stock raiser does not know at what price carcass meats sell. He either kills his own meat on the ranch and thereby loses interest in the dead meat end of the business, or he buys his meats from the retail butcher at high prices, and judges therefrom that meat prices are too high compared to the prices he gets for his live beeves. So the livestock raiser has been led to believe that cattle are 30 per cent. lower now than in 1902, and that meats are 30 per cent. higher now than then. On that proposition rests the business venture of the independents. In fact, Secretary Martin, of the Independent Company, has so stated it. The truth is the opposite. In 1902 live beeves brought up to 9c. per lb. Carcass stuff sold as high as 12½c. per lb. Now, live beeves bring as high as 5¼c. per lb., while carcass beef cannot command 8c. per lb. wholesale.

The German article continues:

"The American population in general is averse to trusts, because they increase the cost of living; it is hoped, therefore, by all that this undertaking of the cattlemen may be crowned with success. It cannot be assumed that the cattlemen will sell meat cheaper than the trust, but that they will receive a proportionate share of the great profits which the trust of meat packers now pocket alone."

The American people do detest real trusts. They would not even accept the German Agra-

rian livestock trust. They will not stand any American cattlemen's trust that shoves up the live stock price, which must ultimately be added to the dead meat cost, and force a rise in the price of meats to the consumer. After all, the professed object of the new packing enterprise is simply to raise the price of cattle. "That having been accomplished, the plant will be shut down and held as a menace to the other meat concerns," frankly declares President John W. Springer, of the concern. Carcass beef, based on present livestock prices, is now being sold at 40 to 60c. per 100 lbs. loss. At a higher price for cattle, and the present—much less a lower—price for meats, the loss will be greater. The consumer, who is the American public, is gradually awakening to the fact that the retail butcher is reaping the harvest—if there is any harvest—and that meats, wholesale, are very cheap.

There are many very strong indications, also, that the more intelligent live stock men are alive to this truth. The big Texas Cattlemen's Association declined to go to the convention which launched the Independent Packing Company, because it did not wish to be bound. This association's members own 4,000,000 head of cattle. It has refused to indorse the new packing idea. Other associations have acted in a similar way. As a matter of fact, though the members of the National Livestock Association own \$800,000,000 worth of livestock, the members have generally refused to take stock in the new enterprise, and comparatively little of its high-sounding \$5,000,000 of incorporated capital has been paid in, with all the efforts made to have it subscribed.

This would seem to indicate that the action of the sheep and dairy cattle end of the association in launching the new idea meets with little practical sympathy among the beef raisers. The American people will not stand for anything which raises the price of the necessities of life, and they are great meat eaters. Carcass beef sells cheaper now than it has sold in a decade. But live beef is higher than it has been for some years, excepting part of 1901, all of 1902 and the early part of 1903. If the cattlemen cannot sell carcass beef cheaper than it is now to be had, the public will take no interest in their scheme. If they sell it higher, the public will take an adverse interest. If they get more for cattle they must raise the price of beef. If they sell meat lower at the present or a higher price for steers they are bankrupted from the beginning.

An Unreliable "Authority."

The German agricultural expert weakens his report by including in it an article taken from Collier's Weekly, a sensational publication, which has carried "yellow journalism" into the weekly periodical field. Though the proprietors of this paper may be lavish in hiring war correspondents and sending battle pictures from Asia by cable, they have economized by making free use of the shears in gathering home news, and their choice in borrowing has fallen upon the unreliable sensational dailies of their own stripe. But as Mr. Scherk seriously incorporates this "scissored filler" in his article, and quotes the paper in which it appeared as an authority, our Ger-

man readers deserve enlightenment. He says:

"In one of their last issues, 'Collier's Weekly,' a well-informed and widely-circulated newspaper, said in reference to the meat trust: 'The proprietors of thousands of herds on the ranges of Wyoming, Colorado, Montana, Kansas, Nebraska and the Dakotas were forced in the last ten years to let the prices for their cattle be determined by a band of dealers without regard to the laws of demand and supply.' The legal investigation which Attorney-General Knox conducted with so much success against the united meat trust during the past year furnished proofs that the agreements of said trusts remain paramount for the market all over the country."

This is a twisted misstatement of facts. The livestock dealers in the sections named, as well as those in other parts of the country, either sold their herds in the stockyards at Omaha, St. Paul, Chicago or elsewhere personally or through the needed and cheaper agency of independent commission merchants. There are about 100 of these men in Chicago alone. The cattle were sold at private or public sale. There are more than fifty big slaughterers in the United States who have buyers at the stockyards looking for cattle for their abattoirs.

A Few of the Independents.

Those concerns commonly referred to as the "meat trust" are Armour & Co., Swift & Company, Nelson Morris & Co., the G. H. Hammond Company and the Fowler interests. Since the first grouping the Omaha Packing Company has been added. But no one thinks of adding the following rabid outsiders—all powerful concerns—to the alleged "meat trust": Cudahy Packing Company (doing \$100,000,000 of business per year); Schwarzschild & Sulzberger Company (\$75,000,000 of business per year); Kingan & Co. (\$50,000,000 of business per year); Jacob Dold Packing Company (\$40,000,000 of business per year); T. M. Sinclair & Co., The Morrells, Plankinton Packing Company, Cudahy Brothers Company, Indianapolis Abattoir Company, Rohe & Brothers, Joseph Stern & Son, Pittsburg Packing and Provision Company, Cleveland Provision and Packing Company, and scores of other plants which do from \$3,000,000 to \$6,000,000 of business per year.

These independent plants have their own buyers in Chicago, Kansas City, Omaha and the other great stockyards centers buying slaughter stock for their plants. The smaller plants and the farmers kill 5,500,000 cattle yearly, while the above concerns and the other big fellows only kill 5,600,000 head of beeves annually, according to the government's official report. These facts alone should refute the statement quoted and lay the German agricultural expert open to the charge of careless "hearsay" research.

Here is more buncombe of the same order:

"It has also been proved that the principal members of said trust, like the Armours and the Swifts, have purchased large ranges in order to either hold back or to market a sufficient number of cattle in order to direct the movements of prices according to their own arbitration."

This is evidently based on the fact that the Swifts have, all along, been owners of ranches—chiefly sheep ranges. The company has not held and does not hold such lands

as are described. Cudahy is reputed to have bought some holdings on the Pacific slope. But Cudahy is an "independent." A canard was published recently that Armour, Swift, Morris and Sulzberger had bought millions of beeves in the southern Gulf country for cattle ranges. It was an airy fabrication. Armour owns no cattle herds nor cattle lands. Neither does Mr. Sulzberger nor his company.

Papers They Never Quote.

These are the facts. They are an indication of the value of Collier's Weekly as a "well-informed newspaper," and the reliability of Mr. Scherk's report. The Daily Drivers' Journal and the Daily Live Stock World, published at Chicago, the Daily Drivers' Telegram, published at Kansas City, the Stockyards Daily Journal, published at St. Joseph, the Daily Driver's Journal Stockman, published at Omaha, the Daily National Livestock Reporter, published at St. Louis, and the other livestock dailies are the papers published in the interest of the livestock industry and are supported by the stock raisers. Not one of these papers has made the foolish claim that beef is dearer now than in 1902, or that wholesale beef is too high in proportion to the price of cattle. Not one of them has made the senseless allegation that the big packers are the only bidders for cattle in the pens, or that they hold cattle-men at their mercy. These papers are better informed on the livestock situation and the interests of their clients than the "yellow press." It is strange, too, that this agricultural expert (sic) has not sought to bolster his story by citing some of these well-informed livestock papers—which, by the way, are never quoted by the "yellow" dailies.

The following is in keeping with other of Mr. Scherk's deductions:

"It appears that neither the revelations nor the convictions of the members of the trust have been of any use; otherwise it would not have been possible for the meat trust still to exist and to flourish and to continue business in the old manner. If the revelations and convictions which have thrown up so much dust would have been efficient, the cattle breeders would not have been obliged to look for ways and means for their protection in the future."

Case Referred to Credits.

The injunction suit brought by Mr. Knox showed nothing of the kind. This case rested upon a credit agreement in regard to the collections of unpaid accounts from retail butchers, and the matter of extending further credit to such delinquents, though they could buy for cash. It had nothing to do with the buying of cattle, or with raisers of cattle. This latter phase of the prosecution failed; so did the charge as to the fixing of carcass meat prices. The packers have appealed the credit agreement point to the Supreme Court of the United States. They claim even an associated right to regulate their own credits and to collect their past due bills in their own business way, inasmuch as this affects meat already sold, and not meat to be sold, for cash.

After some scattering remarks about meat control, Mr. Scherk closes with the following:

"The prospective battle will no doubt be very bitter, because the meat trust was used

TEXAS ROADS REFUSE LIVESTOCK

The Texas & Pacific Railroad Company, one of the big Texas trunk lines, has thrown a bomb into the camp of the stock raisers by announcing the abolition of all interstate stock rates, and declaring that it will not hereafter seek stock business. It is said that the road has had so many damage suits on account of trouble in stock transportation that it has wiped out all profits, and that hereafter the live stock men can haul their stock to market over other lines, or drive them.

The stockmen are nonplussed, and there is talk of going to the Texas Legislature for relief. It is reported that all other Texas roads may follow the example of the Texas & Pacific, the object being to counteract the present growing agitation against the roads in the matter of fair live stock rates and proper transportation facilities.

In his circular General Freight Agent Sargent states that this conclusion has been

reached by the company after giving the matter due consideration, and assigns as a reason for the step to be taken that the live stock business of the company has been the basis of nearly all the damage claims brought against the Texas & Pacific Company. Mr. Sargent says that 44 per cent. of the damage suits filed against the company for the six months ending March 1 are due to actions brought by shippers of live stock, and that under such conditions the company does not care to solicit the business.

The order says that beginning April 1, 1904, the Texas & Pacific will abolish interstate joint live stock rates in carload lots in connection with other roads, and will not after that date seek business from the stockmen. All connections have been advised of this action by the Texas & Pacific, and have also asked that live stock tariffs be revised accordingly, effective not later than the date mentioned above.

MILLER MADE BUTTERINE MANAGER

W. E. Miller, who for several years so ably managed the butterine department of the Armour Packing Company at Kansas City, Mo., has just been promoted to Chicago and placed in charge of the butterine business of the Armour interests in the United States. Mr. Miller is one of the brightest men in the business. He is young and a perfect live wire of energy. During the hard fights for butterine in Congress his sledgehammer blows were among the unavailable arguments which the butter crowd and their Congressmen encountered. He showed them from point to point and into the uncomfortable corner from

which they wiggled by the use of subterfuges and the whining act.

Mr. Miller has a record which would arouse the pride of men much older in years and experience. There is no man in the country who knows more about the butterine business. Armour & Company try their men on their merits and then promote them by that same token without the asking. Such promotions as the one in question are typical of the Company. It is safe to say that General Butterine Manager W. E. Miller will add lustre to his fine record, and, at the same time, bring more business to the Armour butterine department.

S. & S. LOSE NEW ORLEANS CASE.

The city of New Orleans won in the suit of the Schwarzschild & Sulzberger Company against the meat inspection ordinance, in which the plaintiffs attacked the ordinance and sought to get out an injunction to prevent its operation. Judge Parlange in the United States Circuit Court, decided that a preliminary injunction cannot be granted and refused the application. He held that the present ordinance was constructed in order to avoid the objections made in a former suit against an old ordinance. In that suit Judge Swain granted an injunction in favor of the plaintiffs and the ordinance was reconstructed by the City Council.

The plaintiffs contended that the inspection was ineffective, was for revenue only, and imposed hardships in the operation of unloading and packing meat, and in some respects worked an injury to the meat itself. It was held that the State Health Board covered the inspection and that the city inspection was unnecessary.

NOT INJURIOUS TO HEALTH.

In its eighth annual report, just issued, the Connecticut Agricultural Experiment Station devotes special attention to food products, of the analysis of which it has made a specialty. It is stated that while the adulteration of food products in certain lines is very general, as a rule the adulterants used are not injurious to health.

heretofore to underbid all competitors so long until the trust alone remained in existence. It cannot be doubted that the trust will apply the same means also against the cattle breeders, and the only question remains whether the latter will be strong enough to stand a protracted fight of that kind."

The alleged "beef trust" kills about 28 per cent. of the beef slaughtered in the United States. Against it, if it sought control, would be the big abattoirs cited, and nearly 1,000 smaller ones. Against it also would be the slow consumptive market and the perishable nature of the product. It must be sold or deteriorate or be found clogging the outlet as other stuff comes forward.

Further argument is useless, if what has already been said is not convincing. It might be added, however, that Mr. Scherk's article seems to have been written solely from an Agrarian point of view, for Agrarian eyes and ears in Germany and to back up the cattle trust which exists there in the interest of the Agrarian pocketbook. It seems that the German public resent this as much as the American people would any combined effort in this country to lift the price of livestock and thereby increase the cost of meat to the consumer. The American packer is now selling meat at 1/2c. per lb. dead loss. That is the meat question which concerns him. The public would reap the benefit if the butcher did not intervene and absorb it to make up his losses of 1902-03.

ALUMINIUM IN GERMAN SAUSAGE

Something of a stir was caused last week by the press reports telegraphed broadcast from Washington that a government chemist had discovered aluminium salts, which are highly deleterious to the human stomach, in samples of imported German sausage analyzed by him. The statement was made that German sausage manufacturers in general used aluminium salts as a preservative in their sausage making, while on the other hand no such practice is followed by American manufacturers. And yet American pork products are barred from Germany on the unjust and libelous ground that they are harmful to public health.

The discovery was made by Ed. MacKay Chace, one of the experts of the Government Bureau of Chemistry, in the course of the series of examinations of imported food products which are being conducted under the direction of the Secretary of Agriculture. Chief Wiley of the Bureau of Chemistry confirmed the discovery in a letter to The National Provisioner last week, in which he said that the government could rightfully object to the importation of German sausages containing such preservatives. The investigations are being pursued by Chief Wiley and his assistants, and further results will be reported.

Following is the report by Mr. Chace of the details of his first analyses:

Chemist Chace's Analysis.

In the course of the usual work upon imported foods carried on in the food laboratory of the Bureau of Chemistry, the writer some time since received a sample of imported canned sausage which was preserved with a salt of aluminium. As aluminium salts are not among those usually employed as preservatives in canned meats, an investigation was started to ascertain the extent of their use, the amount used, etc. Up to the time of writing they have been found in several samples of canned sausage, all the produce of two manufacturers, however. They have not been found in samples of imported smoked sausage or domestic canned or smoked sausage. The two manufacturers in whose goods the aluminium was detected acknowledged the use of small quantities of the basic acetate of aluminium.

The detection of the addition of aluminium is easily carried out, inasmuch as it is not a normal constituent of the ash of flesh. (See the works of Bunge and Halliburton on physiological chemistry.) The following method was found to work satisfactorily: About 25 grams of the ground sausage were ashed (complete ashing is not necessary), and the ash dissolved in strong hydrochloric acid, sodium hydroxide added in excess, the whole boiled, the precipitate and insoluble ash filtered off, the filtrate made acid with hydrochloric acid, and the aluminium precipitated with ammonia, partly as hydroxide, partly as phosphate. The precipitate may be filtered off and tested on charcoal with cobalt nitrate. Whenever possible the work should be done in platinum ware in order to avoid solution of aluminium from glass or porcelain. The reagents should always be tested.

With the amount added as a preservative no trouble was found in detecting it in the above manner, enough of the precipitate be-

ing obtained to render further identification possible if desired.

For the quantitative determination it was found that the method of Wachenroder and Fresenius gave accurate results. (See Fresenius' Quantitative Analysis, American edition of 1904, vol. I, page 459.) The finely ground sausage is heated over a low flame until danger of spurting is past, when the mass is thoroughly charred. It is then cooled, digested on the water-bath for some time with strongest hydrochloric acid, filtered, slightly washed, and the filter and residue reignited. This ash is usually of a good gray color and small in quantity. It is dissolved as before in strongest hydrochloric acid, filtered, and the filtrate added to the former one. Any residue left on the filter paper should be examined for aluminium.

The combined precipitates obtained above are made slightly alkaline with ammonia and barium chloride added until no further precipitate is formed. The hydroxide of aluminium and the phosphates of aluminium and barium are filtered off, slightly washed, and dissolved in the least possible amount of hydrochloric acid; the solution obtained saturated with barium carbonate, potassium hydrate added in excess, and the whole digested for some time. Finally the barium in solution is precipitated with sodium carbonate, the phosphate and carbonate of barium filtered off, and washed. The filtrate is acidified with hydrochloric acid and the aluminium determined in the usual way.

The cans upon which the quantitative determinations were carried out were the one-pound type, containing from 400 to 450 grams of sausage and from 175 to 200 c. c. of liquor. The sausages were removed from the liquor and ground without the casing. The liquor was evaporated to dryness, ashed, and the aluminium determined as in the sausage.

The amount of the preservative found was as follows: No. 1 averaged on several lots 11.2 milligrams of Al_2O_3 per 100 grams of sausage, and 12.6 milligrams to the total liquor, making the entire content of the can between 60 and 70 milligrams. No. 2 averaged on the two lots examined 31.3 milligrams per 100 grams of sausage, and 54.3 milligrams in the total liquor, making 175 to 200 milligrams to the can.

The manufacturer of No. 2 claims to add one-half of one per cent. of the basic acetate. It is supposed that the solution used is that of the German Pharmacopoeia, the preparation of which is carried out according to the following formula: Aluminium sulphate, 30 grams; water, 100 grams; calcium carbonate, 13 grams; acetic acid, 36 grams. This solution would contain about five per cent. of Al_2O_3 by weight, and if added to the extent of one-half per cent. would introduce into the sausage 25.0 milligrams of Al_2O_3 per 100 grams, slightly less than the amount found.

Might Absorb All Salt.

It is possible that the sausage might in time absorb the entire amount of the aluminium salt contained in the liquor by reason of its diffusion through the casing. When liquor containing the preservative comes in contact with the ground sausage, the aluminium is fixed by the constituents of the meat,

as a compound which is insoluble in boiling water, boiling hydrochloric acid of tenth normal strength, and only slightly soluble in a mixture of equal parts of strongest hydrochloric acid and water. To illustrate: 50 grams of sausage were mixed with the liquor from a can (190 c. c. in volume) and allowed to stand in the refrigerator of the laboratory for forty-eight hours. The liquor was then filtered off and tested for aluminium with negative results.

The claim is made for this as for every other preservative that it is harmless. It is not the purpose of this paper to add to the testimony already collected on the injurious effect of soluble aluminium salts upon the human digestion. The consensus of opinion is that such salts retard the digestion in both the stomach and intestines.

The only question to be answered, then, is as to the solubility of the salt present in the digestive fluids. As has been stated, it is insoluble in boiling water and dilute hydrochloric acid. If, however, 50 grams of sausage be treated with 100 c. c. of .33 per cent. hydrochloric acid containing one-tenth gram of pepsin, for four hours at 40°C, filtered and the filtrate washed, and tested for aluminium, no small quantity of that metal will be found.

To determine what proportion of the preservative would be dissolved in the stomach during digestion the following experiments were tried: 50 grams of the two samples, finely ground, were digested with 200 c. c. of the pepsin solution for twelve hours, an aliquot portion filtered off and the aluminium determined. Sample No. 1 contained 14.9 milligrams of Al_2O_3 per 100 grams of the sausage, of which 12 milligrams were dissolved by the solution of 82.7 per cent. Sample No. 2 contained 34 milligrams per 100 grams of sausage, of which 24 milligrams were dissolved, or 70.3 per cent., showing that a very large proportion of the compound is dissolved during the process of digestion and becomes a retarding factor.

A LOT OF LIVE STOCK.

Uruguay is becoming of more importance in the live stock world. This South American country has about 6,300,000 cattle and 18,000,000 sheep, but only 48,000 hogs and 9,000 goats. As the above statistics are based upon the taxation figures, the probability is that Uruguay has more live stock than that, for there are more than likely many tax dodgers in the country who hide their stock when the assessor makes his rounds, or underestimate when giving in their lists. The numbers given are a sufficient warrant and excuse for the activity and government inducements there in matters of the packing trade.

STARCH MACHINERY FOR RUSSIA.

Twelve new factories for potato starch are in course of erection in the Warsaw district, which is due to the large crops of potatoes in that section of Russia. About 90 potato starch factories are already in operation. There is a large demand for machinery for the manufacture of this starch, and there is a decided tendency to give preference to all foreign machinery other than German. Offers may be directed to Bronislaw Oderfeld, 17, Ujasdowska Aleja, Warsaw. Prices should be stated, if possible, delivered at Stettin, Germany.

THE HOG INDUSTRY

*Condensed from Bulletin No. 47, Bureau of Animal Industry, U. S. Dept. of Agriculture,
By George M. Rommel, B.S.A., Expert in Animal Husbandry.*

(Continued from last week.)

The second of the three divisions of Mr. Rommel's work is devoted to "Recent Experimental Work in Pork Production." In his introductory remarks he says that in presenting the following review of experimental work, no attempt is made to give a complete compilation of all the work that has been done in pork production; a resume of this work would be simply a repetition of what has previously been accomplished in a more thorough manner by others. During recent years, however, the experiment stations have paid a very large amount of attention to this phase of animal husbandry, some of which has the highest value to the producer; and this work has not been compiled heretofore.

In this bulletin complete reviews are given of those experiments only where methods or results are in dispute (such as the relative value of feeding grain whole or ground), or where a practically new feed is being used, to note its effects (such as cotton-seed meal, which heretofore has been regarded as out of the question as a hog feed). Information on grain fed whole or ground and on the feeding of cotton-seed meal is always in order, and their importance, both to the farmer and to the experimentalist, is such that a view of the entire field is necessary to a proper and intelligent discussion of the subject. Where a method has become practically obsolete in hog feeding—such, for example, as cooking—very little recent study has been done by experiment stations.

Points to Bear in Mind.

In studying the results of experimental work it is important to bear in mind that different conditions influence strongly the work of different stations. At the conference of animal husbandry workers in Chicago during the International Live Stock Exposition of 1902, Prof. W. A. Henry called attention to this fact. He pointed out that an "average," to be of any scientific value, should summarize work conducted with all conditions—such as age of animals, breeding, kinds of feed, care, management, and season of the year—as uniform as possible, and should represent the results of the labor of one man conducted at the same station and extending over a very considerable term of years. These factors are all of the highest importance, and it is essential that they be considered in studying results. Good feeders know that animals of different ages feed differently, that breed is often an influential factor, that all feeds do not have the same value in the ration, and that good shelter and regular and skillful feeding are highly essential to secure profitable results. It is also readily apparent that, if all other conditions are equal, an experiment conducted in Maine to compare the value of corn meal with that of whole shelled corn cannot be averaged, but only compared, with one of a similar nature conducted in Iowa or Oregon; the factor of climate is important and influential. The results of an experiment with hogs fed in the summer months are not to be averaged with those obtained with similar animals under exactly similar conditions of

feed, care, and management during the winter. Even where all conditions are similar and every care has been taken to make them as uniform as possible, seasonal variations of climate may inject another factor of error. Again, though not so frequently recognized, the personality of the experimentalist has a great deal to do with the value of his work. It is unfortunate that frequently a man is placed in a position to conduct experimental work whose qualifications for it are not of the highest order. Results from his work are not so valuable as those from men who combine a large fund of scientific information with an intimate knowledge of the practical care and management of the animals fed.

Farmer Should Be Experimenter.

If the farmer will bear in mind the influence of these modifying conditions, he can better realize the difficulties that surround experimental feeding; he will better understand their value, and will find himself listening more carefully to the advice of experiment station workers, reading bulletins with more confidence, and condemning less hastily what seems to be inaccurate. If each farmer regarded himself, in a way, as an experimentalist and should spend a small amount of time in keeping records of his operations, studying the results with the aid of the information at his command, and if he should at the same time keep in touch with the authorities of his experiment station, there is little doubt that many of the problems now perplexing farmers would be brought much nearer to a solution and the business of feeding live stock rendered more systematic and profitable.

While much may be said against averages, it is a fact that, unless the conditions vary greatly and the extremes are too divergent, a general idea is conveyed by an average that has a practical utility, in that it shows the general results that may be expected to follow certain practices. The averages shown in these pages should be regarded in this light.

Principles of Feeding.

Feeds, as regards their physical characteristics, are generally divided into two classes, namely, concentrated feeds, or concentrates, and bulky feeds, commonly called coarse fodder, roughage, or forage. The amount of bulky feed required is different with different species of animals and depends upon the complexity of the feed of the animal; and the kind and variety of feed in turn have a direct relation to the length and complexity of the alimentary canal. Pigs are fed almost exclusively on a vegetable diet and only occasionally indulge their appetite for an animal diet. As a consequence of this variation in the range of feed eaten in domestication, these animals have a longer and more complicated digestive tract than the same species in the wild state. The function of bulk in the feed is more than the mere furnishing of nutriment; for, in a mechanical way, it aids digestion. Pigs require less bulky feed than other domestic animals, but recent experiments show that, to a certain

extent, hay feeding is very valuable in pork production. Where herbivorous animals have been maintained for an extended period on feed which was exclusively of a concentrated nature, derangement of digestion has resulted.

Chemical Constituents of Feeds.

From a chemical standpoint, the constituents of feeds that most immediately concern the feeder are the nitrogenous substances, generally termed protein compounds, which contain a large percentage of nitrogen; the starches, sugars, etc., called carbonaceous substances or carbohydrates, from the fact that they are composed of carbon, with hydrogen and oxygen in the proportions in which they occur in water, and fat, found in analysis under the heading of "ether extract." Ash is also of importance and often should be more carefully considered when feeders are making up their rations. The most valuable portion of feeds is the water-free substance, or dry matter, of the feed. This is what remains of a feed after heating it in a drying chamber at or near the boiling point until repeated weighings show no change in weight. The amount of water present in feed is obviously an important factor. While water yields neither tissue-building material nor energy, it enters into the composition of the body and is indispensable. When animals are compelled to take into the system water beyond the normal amount, undesirable results will follow. When animals are fed exclusively on roots or skim milk they do not receive more than enough to maintain bodily functions. This is readily understood when we consider that roots contain about 90 per cent. and skim milk about 88 per cent. of water. On the other hand, hay does not ordinarily contain more than 15 to 20 per cent. of water, while grains, leguminous seeds, and milling products contain only about 10 per cent. The water content of feed is very much influenced by weather conditions, especially in the case of roughage, which absorbs large amounts of moisture in wet weather.

A factor that is being more carefully considered in studying the value of a feed, or a ration, is the amount of energy which it will yield. When feed is utilized in the animal body a certain amount of heat is evolved, the process not being unlike the consumption of fuel in a furnace. This heat is converted into the energy which is necessary whenever work is performed. The amount of work performed by an animal in the ordinary processes of "hustling for a living"—that is, finding its feed, eating it, and digesting it—is enormous. It is, therefore, readily apparent that the heat-producing powers of feed have a very much more important function than the maintenance of bodily warmth. The unit of energy used in computing the value of a feed from this standpoint is the "small" calorie, which is the amount of heat necessary to raise 1 gram of water 1° C. Fats yield a greater amount of energy than either the carbohydrates or protein, there being very little less energy given up by proteids when digested by carbohydrates.

Relation of Feed to Animal Body.

We have seen that the most important constituents of feed are the proteids, the carbohydrates, and the fats. These are practically all that the feeder considers in making up his rations, although the physiologist

must consider other compounds which exist in smaller quantities. In the body we find, in the water-free matter, the proteids, the fat, and the ash. The water of the feed reappears as the water in the body. The proteids in the feed form the proteids in the body. The fat of the body is formed from the carbohydrates and fat of the feed and occasionally from the proteids. The ash of the body, such as the mineral matter of the bones, comes from the ash of the feed. The three principal feed constituents—fat, carbohydrates, and protein—yield energy in the order named, fat yielding the most energy for an equal weight of feed. The carbohydrates and proteids are practically equal in heat-yielding power.

Now, as different animals have different demands upon them, we must expect them to require these constituents of feed in different proportions. To be more explicit, a young and growing animal is building up tissue rapidly, and this should be largely muscular and bony if the best health is maintained. Muscular tissue is largely made up of proteids, and we therefore expect a large amount of protein matter in the feed. There should also be a plentiful supply of mineral matter and phosphates so that the skeleton may be properly built up. As milk is rich in nitrogenous material, we find it an excellent feed for growing animals. Again, animals that are to be fattened rapidly must have a large amount of fat-producing material in the ration, for which reason farmers find corn such a valuable feed for this purpose.

The amount of nutritive material which an animal can get from his feed is a very important factor. It is obvious that when skim milk or roots are fed alone immense quantities must be eaten to give a sufficient amount of nutritive material. A similar condition is met with when feeds having a low digestibility are given. For instance, when animals are wintered at straw stacks they acquire large stomachs by reason of gorging themselves with coarse, bulky feed, and generally have a half-starved appearance because they are not able to obtain from such feed an adequate amount of nourishment to maintain flesh and condition. In discussing feeding, the term "nutritive ratio" is frequently met. This means simply the ratio between the total amount of digestible protein in a ration (that is, one day's feed) to the total amount of digestible carbohydrates plus 2.25 times the digestible fat. The fat is of greater value for the purpose of yielding energy than the carbohydrates, and chemists have determined that this ratio is about 2.25; hence the reason for this factor in the computation of a ration. As the functions of the fat and the carbohydrates are very similar, the reason is apparent for the addition of the former. There are many publications available that discuss in detail the computation of rations. One of the principal things to avoid is getting a ration which, while correct, so far as nutritive ratio is concerned, cannot be fed successfully on account of its low digestibility or high water content.

(To be Continued.)

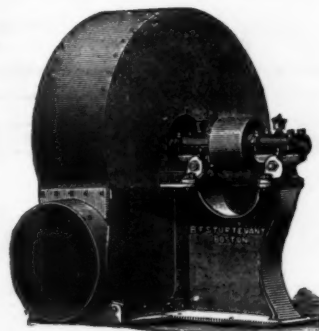
WHERE TO LOOK.

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STATE OF OUR EXPORT TRADE

Some interesting figures regarding the commerce of the United States with the various countries of the world are presented in the usual monthly statement issued by the Department of Commerce and Labor through its Bureau of Statistics. The statement covers the eight months ending with February, 1904, and compared conditions in those eight months with corresponding periods of earlier years. The total exports from the United States to all parts of the world during the eight months ending with February, 1904, were valued at 1,048 millions against 982 millions in the corresponding months of last year.

To Europe the exports from the United States were 785 millions, against 728 million dollars in the corresponding months of last year. Thus the exports to Europe show an increase of 57 million dollars. To North America, other than the United States, our exports were 150 millions, against 135 millions in the corresponding months of last year, an increase of 15 million dollars. To South America our exports were 35 millions against 27 millions last year. To Asia our exports were 39 millions against 41 millions in the eight months of last year. To Oceania our exports were 23 millions against 26 millions in the corresponding months of last year. To Africa our exports were 17 millions, against 25 millions in the corresponding months of last year. Thus, the increase in exports is exclusively to Europe, North and South America, while Asia, Oceania, and Africa show, in each case, a decrease.

To Asia the reduction is presumably due in part to the existing hostilities which unsettled trade and in part to the very high prices of cotton, which reduced the exports of cotton to Japan from 70 million pounds in the eight months ending with February, 1903, to 20 million pounds in the eight months ending with February, 1904, making the reduction in value of raw cotton exported to Japan alone about 4½ million dollars. To Oceania the reduction occurs in the exports

to British Australasia. This decrease occurred chiefly during the months of January and February and is apparently due in a large degree to the adoption of a preferential tariff in New Zealand, the details of which were so little known in the latter part of the year as to cause a suspension of exports to New Zealand pending more definite information as to the exact rates which the new tariff places upon merchandise from the United States in comparison with like products from the United Kingdom.

Similar conditions in British South Africa are apparently the chief cause in the reduction of exports to Africa, which fell, as already noted, from 25 millions in the eight months ending with February, 1903, to 17 million dollars in the corresponding months ending with February, 1904. All of the British territories in South Africa are included in the African Customs Union, and the preferential tariff adopted by that customs union gives the products of the United Kingdom materially lower tariff rates than on those from other countries, the reduction in tariff ranging from 5 to 25 per cent. To Canada, where the preferential tariff has been sufficiently long in operation for its details to be thoroughly understood, exports from the United States show a steady growth, the total for the eight months ending with February, 1904, being \$81,060,462, against \$75,170,150 in the corresponding months of the preceding year, and \$70,774,602 in the same months of the fiscal year 1902.

The effect of reciprocity with Cuba begins to make itself apparent in the figures of our commerce with that island. Exports from the United States to Cuba during February, 1904, were \$2,152,328, against \$1,535,978 in February last year, and for the eight months ending with February, 1904, were \$16,598,884, against \$14,066,518 in the corresponding months of the preceding year.

To China exports from the United States continue to show a marked reduction as compared with the corresponding months of the preceding year. (Continued on page 20.)

TRADE GLEANINGS

Mengel Zoekler Company, Davenport, Ia.; capital \$25,000. Packing business. William Mengel, president; Frank Haynes, vice-president; Charles Zoekler, treasurer.

Hemmers Soap Company, Cincinnati, O., has increased its capital from \$60,000 to \$100,000.

Gulfport Cottonseed Oil Company, Gulfport, La., has ordered 1,000,000 feet of lumber for the erection of a fertilizer works.

Eastern Dressed Beef Company, Jersey City, N. J.; capital \$50,000. Richard F. Tully, Philip B. Strong and F. E. Baker, incorporators.

Piqua Packing Company, Piqua, O.; capital \$25,000. H. L. Denman, W. B. Ten Eick and Charles Morton, incorporators.

E. W. Penly will erect a packing house in Auburn, Me., to cost \$75,000.

D. E. Dowling, for over twenty years superintendent and manager of the Standard Soap Works in West Berkeley, Cal., has resigned his position. Mr. Dowling is succeeded by Mark Sherwin, of St. Louis, formerly associated with the Wolpke Soap Company of that city.

Cuban Salt Company, Port Huron, Mich., capital, \$250,000, has been incorporated.

The works of the Pelham Oil & Fertilizer Company, in Pelham, Ga., were destroyed by fire on March 24. Lost \$75,000. They will be rebuilt at once.

Cape City Soap Works, Cape Girardeau, Mo.; capital \$40,000. C. J. Gratiot, Louis B. Houck and others, incorporators.

(Continued from page 19.)

pared with the preceding two years. Our total exports to the Chinese Empire for the eight months ending with February, 1904, were \$8,174,556, against \$12,440,331 in the corresponding months of last year, and \$15,468,220 in the same months of the fiscal year 1902. For the month of February, 1904, our exports to China were \$1,894,423, against \$2,022,676 in February, 1903.

To other sections of the Orient our exports show an increase, the total to Asia in the eight months ending with February being \$38,966,741, against \$41,314,482 in the same months of last year, a reduction of \$2,347,741, while in the exports to China alone the reduction is \$4,265,775, thus indicating an increase to Asia other than China. To Russia, both in Europe and Asia, the exports from the United States continue to show an increase.

One especially interesting feature of the statement of our commerce with the various countries is that of trade with the new Republic of Panama. The statement shows the exports to the Republic of Panama for the months of January and February. Our total exports to that Republic in the two months named were \$311,087. For February alone our exports to Panama were \$158,197.

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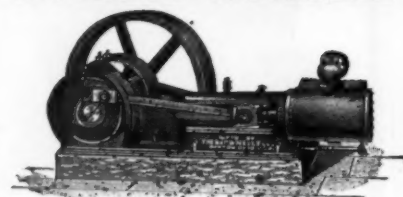
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WILL SELL ITS ICE PLANT.

The Government will sell its elaborate and expensive ice and cold storage plant at Manila. Secretary Taft had a conference with Gen. Chaffee, chief of staff; Quartermaster General Humphrey and Commissary General Weston in regard to the disposition of the plant, as a result of which authority was cabled to Gov. Wright to sell the plant at a fair price after advertisement inviting proposals. This plant was built as a government institution out of the revenues of the Philippine government. A suggestion made by Gov. Wright that the deed of sale provide for the use of the plant by the government for cold storage purposes if necessary was disapproved, on the ground that the army could protect itself without any such restriction, and that such condition might interfere with the profitable sale of the plant, which has been appraised by the Philippine commission at \$1,000,000 in gold.

COLD STORAGE FOR ARGENTINA.

The International Live Stock Products Company, whose offices are in the Produce Exchange Annex, New York, has decided to build an extensive cold storage plant at Quequen, Argentine Republic. The plant will have an initial capacity of 2,000 sheep and 400 cattle per day. Its cost, it is estimated, will be about \$500,000 gold. O. B. Blackman, secretary and treasurer of the company, has just returned from an extended visit to the Argentine Republic, where he concluded negotiations for the establishing of the works.

SOUTHEASTERN CATTLE BREEDERS.

The stock raisers of the Southeastern States, in session at Jacksonville, Fla., last week, formed the Southeastern Cattle Breeders' Association, and elected the following officers: President, S. H. Gaitskill, Florida; vice-presidents, C. U. Carson, U. C. Wade and Dr. H. F. Cary, Alabama; secretary, J. A. Holloman, Florida; treasurer, Jasper Summerlin, Florida; executive committee, A. G. Cummer, R. M. Storm, J. M. Lee, W. B. Henderson, G. Murphy, John L. Edwards, J. A. Crawford and McQueen Chaires, of Florida; W. R. Townsend, R. E. Park and W. L. Glessner, of Georgia, and C. C. Thach, H. H. Welch and T. C. Chambliss, of Alabama. The president of the association was empowered to appoint a board of arbitration.

ARMY CONTRACT TO ARMOUR.

The Armour Packing Company, at South Omaha, has just been awarded a contract for 60,000 pounds of Government bacon, to be delivered to the army headquarters at Vancouver Barracks, Wash. This bacon has to be specially prepared under Government inspection.

OIL FACTORY AT WORLD'S FAIR.

California will install an olive oil factory in the California space in the Agricultural Building at the World's Fair. The process of extracting the oil will be shown in detail.

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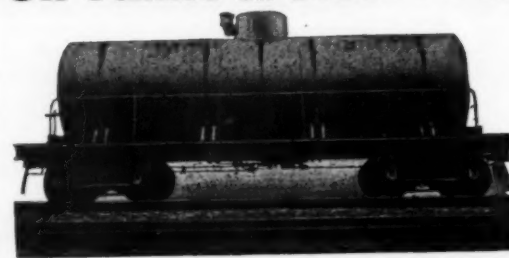
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glue makers, etc.
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THE NATIONAL PROVISIONER

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EXPORTS SHOWN BY STEAMERS.

Following were the exports of commodities from New York to Europe for the week ending March 26, 1904, as shown by Lunham & Moore's statement:

Steamers.	Oil				—Beef—			—Lard—	
	Cake.	Cheese.	Bacon.	Butter.	Tcs.	Bbls.	Pork.	Tcs.	Pkgs.
Umbria, Liverpool	4141	252	900	50	.....	.....	.....	427	350
Cedric, Liverpool	2961	2080	47	210	.....	330	110	2317	.....
Victorian, Liverpool	1763	2068	910	152	.....	.....	50	120	.....
St. Paul, Southampton .....	.....	1219	2218	.....	.....	.....	.....	1140	.....
Minneapolis, London	3060	159	245	.....	.....	.....	560	3955	.....
Llandaff City, Bristol	546	171	.....	.....	.....	125	57	2645	.....
Idaho, Hull	999	1193	.....	.....	.....	.....	625	11007	.....
Corinthian, Glasgow	628	790	300	137	.....	.....	310	275	.....
Bleucher, Hamburg .....	.....	20	106	.....	15	85	275	.....	.....
Graf Waldersee, Hamburg .....	.....	25	260	10	338	10	980	1185	.....
Noordam, Rotterdam	15736	.....	.....	.....	100	25	550	1040	.....
Kroonland, Antwerp	7390	.....	150	.....	.....	85	.....	249	.....
Main, Bremen .....	.....	25	.....	.....	150	.....	.....	.....	.....
Kronprinz Wilhelm, Bremen .....	.....	.....	.....	.....	50	.....	50	100	.....
Patria, Lisbon .....	.....	.....	.....	.....	200	.....	.....	.....	.....
Patria, Oporto .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Perugia, Mediterranean .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Buenos Aires, Mediterranean .....	.....	.....	.....	.....	.....	.....	.....	180	.....
Hohenzollern, Mediterranean .....	.....	103	.....	.....	.....	.....	25	100	.....
Neustria, Mediterranean .....	.....	27	13	25	.....	.....	114	250	.....
Nord America, Mediterranean .....	.....	.....	.....	.....	.....	.....	.....	100	.....
Prinz Adalbert, Mediterranean .....	.....	75	.....	.....	.....	.....	.....	.....	.....
Daghestan, South Africa .....	.....	.....	.....	.....	.....	.....	.....	705	.....
Totals	24889	14403	7199	4076	572	878	660	4133	25718
Last week	27703	6029	9137	6928	694	1511	923	7996	33116
Same time in 1903	34138	4216	7453	4175	560	1084	558	4199	53596

ADDITIONAL FEBRUARY EXPORTS.

Following are figures compiled by the Bureau of Statistics, Department of Commerce and Labor, on certain exports for February, 1904, and for the eight months ending with February, as compared with the same period of the previous year. These are in addition to the export figures for meats and provisions for February published in The National Provisioner on March 19:

Bones, hoofs, horns, etc.—February, 1903, value, \$13,456; February, 1904, value \$10,619. For eight months ending February, 1903, value \$126,618; same period, 1904, value \$130,850.

Hides and skins.—February, 1903, 1,307,150; value, \$114,479; February, 1904, 2,292,369; value, \$232,078. For eight months ending February, 1903, 8,312,338; value, \$768,325; same period, 1904, 22,422,172; value, \$2,207,905.

Cottonseed oil-cake and meal.—February, 1903, 85,499,898 lbs.; value, \$1,000,249; February, 1904, 74,711,922 lbs.; value, \$836,299. For eight months ending February, 1903, 833,142,470 lbs.; value, \$9,710,545; same period, 1904, 628,766,487 lbs.; value, \$6,934,148.

Lard Oil.—February, 1903, 25,857 gals.; value, \$21,096; February, 1904, 23,550 gals.; value, \$15,123. For eight months ending February, 1903, 248,494 gals.; value, \$213,192; same period, 1904, 235,239 gals.; value, \$158,226.

Cottonseed Oil.—February, 1903, 2,908,178 gals.; value, \$1,154,352; February, 1904, 3,441,645 gals.; value, \$1,286,079. For eight months ending February, 1903, 27,190,792 gals.; value, \$10,798,474; same period, 1904, 19,035,212 gals.; value, \$7,206,195.

SEE PAGE 48 FOR
WANTED and FOR SALE
ADVERTISEMENTS

EXPORTS OF PROVISIONS

Exports of hog products from Atlantic ports for week ending March 26, with comparative tables:

	PORK, BARRELS.		
	Week	Week	Nov. 1, 1903, to
	1904.	1903.	Mar. 26, 1904.
United Kingdom.....	1,195	759	21,053
Continent	740	421	8,747
So. and Cen. Am....	85	708	9,425
West Indies.....	1,152	1,393	26,875
Br. No. Am. Col....	47	940	4,942
Other countries.....	125	26	1,577
Totals	3,344	4,247	72,619

BACON AND HAMS, POUNDS.		
United Kingdom.....	9,002,088	13,913,289
Continent	1,823,527	628,386
So. and Cen. Am....	98,783	217,350
West Indies.....	447,925	195,550
Br. No. Am. Col....	.....	12,400
Other countries.....	32,175	6,100
Totals	11,404,498	14,973,075

LARD, POUNDS.		
United Kingdom.....	3,848,183	6,417,082
Continent	9,917,010	4,523,257
So. and Cen. Am....	285,310	516,755
West Indies.....	975,940	687,535
Br. No. Am. Col....	.....	20,080
Other countries.....	70,740	25,629
Totals	15,977,183	12,199,929

RECAPITULATION OF WEEK'S EXPORTS.			
	Pork, bbls.	Bacon and Hams, lbs.	Lard, lbs.
New York.....	2,454	4,130,825	3,767,399
Boston	147	3,430,350	1,326,993
Portland, Me.....	.....	1,147,650	284,500
Philadelphia	172	591,862	1,941,159
Baltimore	365	1,374,211	5,542,621
New Orleans.....	55	129,225	.....
Newport News.....	76	.....	1,358,100
St. John, N. B.....	75	416,250	190,050
Mobile .....	.....	184,125	88,900
Pensacola .....	.....	.....	577,500
Totals	3,344	11,404,498	15,977,183

COMPARATIVE SUMMARY.			
	Nov. 1, 1903, to Mar. 26, 1904.	Nov. 1, 1902, to Mar. 28, 1903.	Increase.
Pork, pounds.....	14,523,800	13,072,200	1,451,600
Bacon & Hams, lbs.	259,700,305	264,151,210	.....
Lard, lbs.....	276,690,459	269,071,837	7,618,622

OCEAN FREIGHT.

	Liverpool.	Glasgow.	Hamburg
	Per Ton.	Per Ton.	Per 100
Canned meats.....	7/6	12/6	16c
Oil cake	6/3	5/	12c
Bacon	7/6	12/6	16c
Lard, tierces.....	7/6	12/6	16c
Cheese.....	30/	25/	2 M
Butter.....	25/	30/	2 M
Tallow.....	7/6	15/	16c
Beef per tierce.....	1/6	2/6	16c
Pork, per bbl	1/3	2/0	16c

The National Provisioner

NEW YORK and
CHICAGO

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THE FOOD TRADE PUBLISHING CO.

(Incorporated Under the Laws of the State of New York.)

DR. J. H. SENNER..... President

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The NATIONAL PROVISIONER NEW YORK AND CHICAGO

TO LOOK INTO MEAT

The Secretary of Commerce and Labor has decided, at the request of certain vote-hunting elements, to investigate the meat situation. He has decided, however, to do it in a departmental manner, quiet and thorough. He will not make a circus performance of it, nor proceed with any spectacular horse-play for dramatic effect. He simply proposes to investigate as any other department proceeds about its business. This is sensible. If everyone investigated before he spoke, there would be less to say on the subject along the lines of recent outbursts of oratory.

The proposition is a simple one. In 1902 all cattle ruled 2c. to 3c. per pound higher than they do now. At the same time all beef sold about 4½ cents per pound higher than it does now, wholesale. The retail price has changed but little, though the slaughterers have nothing to do with that.

Secretary Cortelyou says that his conclusions will be announced when his department reaches them. That is proper. It is to be hoped that he will go to work at once and reach the conclusions as early as possible. It is to be hoped that the country will accept them when they are announced. Anyone who cares to go into the stock yards and watch the sale of cattle, and then see the sale price of the same stock in carcass beef, will at once realize how senseless and untruthful is the rot published these days by papers which are supposed to lead public opinion by the soundness of their own positions. Beef has not been lower, wholesale, in years than it now is and has been for more than six months. Cattle are relatively higher than in 1902.

BIG FERTILIZER MOVEMENT

The high prices of cotton have stimulated the sale of vegetable and all commercial fertilizers. The farmers not only obtained the wherewithal to purchase fertilizers for this year's crop, but they are further actuated by the hope that cotton will remain high until the next cotton crop is marketed. That view is being taken all over the South, and an excellent movement of cottonseed mill fertilizer is now taking place. The orders have been placed by agents and merchants. The smaller mills throughout the cotton belt have made good trades of fertilizer for seed.

Many farmers are holding their seed for planting and the effort will be made to produce a bumper crop. The railroads are doing a big fertilizer movement trade. The farmers are now putting their seed in the

ground very fast. The whole crop will be planted within two or three weeks. Much planting is being delayed by the late arrival of both the spring season and fertilizers. The cotton oil mills will close out their product at the advanced price and some of them will get a bit more. Anything above 7 cent cotton pays. The fall market looks like 9 cents now in the face of a probable strong demand for lint by the mills. The 1903-4 fertilizer season will be the most profitable one in years for the crushers of the South.

A COLD STORAGE CANARD

It is amusing to read about the "spring rise in beef." Old butchers always looked for the spring rise in beef because the stock that were stall-fed during the winter and the early spring then came into the market in larger numbers after the summer grass-fed and fall grass and provender fed stock ran out along in January. They had ceased coming from the South, and the refrigerators had finally disgorged the last store stock of this kind. These things have been largely changed in the last few years by the marketing of all-the-year around prime or semi-prime beef. The refrigerator has had a hand in it, too.

But just now beef prices need no pulling down. They are very low. It is arrant nonsense to say that the refrigerators are overloaded with beef meat which has been stored for higher prices, as some seem to think. If the market will not take this beef at reasonable prices it cannot take it and the continued large kill at a higher price. The plants would have to stop. That would mean ruin, for it would stop every by-product factory. As a matter of fact the regular slaughter proceeds. There are millions of pounds of meats always in storage, because it takes nearly two weeks to properly refrigerate carcass meats. If this storage yarn were true it could contradict the allegation of high prices. Neither statement is true.

THE FREIGHT RATE

The freight rate, like the insurance rate, still engages the serious attention of the live-stock and the meat shippers. The complaints of the two classes of merchants are different, but they are both upon the basis of too high an embargo on the products hauled. The stockman does not see the justice of adding 3 cents per 100 pounds upon the haulage rate when the roads made good dividends at the old tariff and gave better service, and also gave free return passes to the men who went forward with the shipments of stock to care for them. The packers feel that the mixed car rate and the reclassification of articles in the new schedules is entirely unjust and burden-

some because of the higher general traffic charge. The roads have a strong pull, and, doubtless, will win.

LABOR'S BURDEN

Labor's burden is not always that which is placed upon it by the employer. Labor's heaviest load is self-imposed. The evil comes from the walking delegate and the sympathetic strike. The employer who accedes to the demands of his employees does not know if the contract of settlement is final; neither does the workman. Without grievance or wish to leave the latter is often ordered out on a sympathetic strike. The whole scheme seems to be wrong and unbusinesslike.

In New York City alone the strikes of 1903 involved 3,500,000 working days and a loss of \$8,000,000 in wages alone. If half of this had been laid aside each year for four years the workingman would have the magnificent sum of \$16,000,000 with which to start and to work out his reforms. Besides this, he would have an object lesson for his argument. Any business can stand the wage limit better than it can stand competition in its own line.

We do not argue the question of the justness of the demands of labor, but question the wisdom of the procedure in the light of the intense suffering which follows. Besides, strikes often fail of their ends. The 1903 strikes in the United States cost labor, in the loss of wages, nearly \$50,000,000. Did the victories equal the interest on that? The enterprises involved also lost heavily and general trade suffered along with the suffering man of brawn. Labor need not give up its fight to better itself, but labor, it seems, should readjust its methods or get a better expedient than the sympathetic strike, which has the soul of dishonor.

GERMANY'S MEAT DUTIES

If Germany has plenty of live stock and flesh food, why does inferior meat in that country, fresh killed, sell 20 per cent higher than does American refrigerator meat in England? Yet that is true. The German wholesale prices are 30 to 40 per cent higher than the English market quotations for Argentine and Australian frozen meats. That means that Germany is buying her own meats at about 20 per cent above the prices of the outside meat market. To maintain these prices the Fatherland found it necessary to inspect American meats out of that market and to raise the duty on imported frozen meats from 1¼c. to 5c. per pound. Prepared meats have to pay 13c. per lb. duty. Just what disease comes in tinned condiments does not appear. That is Germany's exclusive little way. Can it last? Her people now feel the shoe pinching.

TECHNICAL AND SCIENTIFIC

PAPER REPLACES LEATHER.

Artificial teeth and "uppers" for boots and shoes are among the new uses to which paper is being put. A substantial business firm of Boston is considering a proposition to take up the work of manufacturing paper hats.

OIL FROM CONDENSED STEAM.

In recovering oil from condensed steam the separation of the oil is effected by the introduction of bubbles of gas or air into the tube receiving the condensation water, whilst the top of this tube, which is surrounded by a tank receiving the separated oil and water, has a horizontal ledge to prevent oil from being carried down to the bottom of the tank with the water.

FATTY ACIDS FROM HYDROCARBONS.

In the formation of fatty acids and soap from hydrocarbons, the hydrocarbons are heated with cetin, spermaceti, or analogous substances, in the presence of concentrated alkali solution. It is stated that the spermaceti esters are decomposed into alkali salts of their respective fatty acids, the liberated alcohols absorbing oxygen and forming the corresponding fatty acids, while the hydrocarbons are first transformed into alcohols and then into fatty acids, which form soaps with the alkali present.

PROCESS OF DELIVERING SKINS.

The skins are first placed in a drum, rotating on hollow trunnions, through which the "soak liquors" may be discharged, and after the drumming in water for about one hour, the liquor is drawn off and the goods are rotated for about one-half hour in the damp condition. These processes are repeated until the washing is complete, each fresh lot of water being slightly warmer than the last, while the density of each soak liquor is observed by hydrometers arranged on a gauge armpiece, until the density falls to about one-tenth degree B., when a final soaking for three hours is allowed with a bran drench, if required.

TO STAIN MARBLE.

In staining marble it is necessary to heat it hot, but not so hot as to injure it, the proper heat being that at which the colors nearly boil. Blue is produced with an alkaline indigo dye; red by dragons blood in alcohol; yellow by gamboge in alcohol; gold color with ammonium chloride (sal ammoniac), zinc sulphate and verdigris, equal parts; green, sap green in alcoholic potassium hydroxide; brown, tincture of logwood; crimson, by a solution of alkanet root in turpentine. Black spots may be produced with silver nitrate. As a general rule, however, marble tables are made by inlaying rather than by staining.

TANNING VALUE OF CHROMIC LIQUOR.

In "single-bath" liquor tanning the determination of available chromic oxide is carried out as follows: 20 to 50 c.c. of the liquor are filtered, heated to the boiling point, and titrated with normal tenth sodium hydroxide solution in the presence of phenol-

phthalein. If the liquor consists definitely of chromic alum or a basic salt of the composition (the OH SO_4), as is often the case, the value is calculated on the basis that 4 molecules of sodium hydroxide precipitate one molecule of chromic oxide. If basic salts of indefinite composition are present, gravimetric methods must be resorted to.

Barkometer (hydrometer) tests of the density of the liquor are of no value in case of a used liquor, owing to the presence of other salts in solution.

DETERMINING HARDNESS OF WATER.

For the determination of the hardness of waters containing, besides calcium salts, larger quantities of magnesium salts, as in the case of river water into which the waste water from potassium chloride factories is led, the following method is recommended: 100 c.c. of the water containing a few drops of alizarin solution are titrated at 100 deg. C. with decinormal hydrochloric acid until the red color of the liquid changes to yellow, and remains so after continued boiling. Multiplication of the number of c.c. of acid used by 2.8 gives the degrees of temporary hardness on the German scale, since one c.c. of decinormal acid corresponds with 2.8 mgrms. of CaO .

A known volume, in excess, of a mixture of equal proportions of decinormal sodium carbonate and decinormal hydroxide solutions is then added, the liquid boiled for a few minutes and afterwards cooled to 15 deg. C. and made up to 200 c.c. The excess of alkali is then measured by titrating 100 c.c. of the filtered liquid with normal tenth hydrochloric acid, using methyl orange as indicator. By multiplying by 2.8 the number of c.c. of normal tenth alkali, calculated on 200 c.c. of the filtrate used, the total hardness is obtained in German degrees.

PROPOSALS

PROPOSALS FOR FRESH VEGETABLES.

—Office of Chief Commissary, Manila, P. I., Jan. 15, 1904.—Sealed proposals, in triplicate, will be received here until 11 A. M., May 10, 1904, and then publicly opened for furnishing and delivery of fresh vegetables to Subsistence Department at Manila, P. I., during year ending June 30, 1905. About 680,000 pounds potatoes and 140,000 pounds onions per month will be required. Accepted vegetables will be admitted free of customs duties. United States reserves right to decrease amount called for in contract by not to exceed 40 per cent. upon reasonable notice to contractor, or to increase amount called for, with consent of contractor. Each proposal must be accompanied by Bidder's Guaranty in amount of \$20,000 or by certified check for that amount on bank of approved standing in Manila. Bidder to whom contract is awarded will be required to give bond, penalty of which will be fixed by Chief Commissary. Information furnished on application. Envelopes containing proposals should be marked: "Proposals for fresh vegetables for F. Y. 1905, to be opened May 10, 1904," and addressed to HENRY G. SHARPE, Colonel, U. S. Army, Chief Commissary.

PROPOSALS FOR SUPPLIES.—De-

partment of the Interior, Washington, D. C., April 2.—Sealed proposals (in duplicate) will be received at this Department until 2 o'clock p. m., Thursday, May 5, 1904, and will be immediately opened thereafter, for furnishing the following classes of supplies, etc., for the Department of the Interior and the Civil Service Commission during the fiscal year ending June 30, 1905, to wit: (1) for fuel and ice; (2) for furniture, carpets and other miscellaneous supplies; (3) for stationery. At the same time and place proposals will be received for such meats, groceries, dry goods, shoes, drugs, paints, hardware, fuel, lumber, chemicals, laboratory apparatus, plumbing, electrical, engraving, photographic supplies, etc., as may be required by the Government Hospital for the Insane, the Geological Survey, the Howard University, and the U. S. Capitol Building and Grounds, respectively, during the fiscal year above indicated. Proposals will also be received for the washing of towels and for the purchase during the same period of the waste paper of the Department of the Interior. Bids must be made on Government blanks. All bids (except those for the purchase of waste paper) accepted and contracts awarded subject to an appropriation by Congress to meet the expense. Forms of proposals, etc., will be furnished on application; requests for blanks must designate the classes of supplies upon which it is proposed to bid. All bidders are invited to be present at the opening. E. A. HITCHCOCK, Secretary. 4t

PROPOSALS FOR BEEF AND VEGETABLES.—Governor's Island, N. Y., March 31, 1904.

Sealed proposals, in triplicate, will be received by commissaries of following posts, respectively, until 11 A. M., April 30, 1904, and then opened, for furnishing and delivering fresh beef required during YEAR beginning July 1, 1904: McKinley, Preble, Williams, Me.; Constitution, N. H.; Ethan Allen, Vt.; Springfield Armory, Watertown Arsenal, Banks, Revere, Rodman, Strong, Warren, Mass.; Adams, Greble, Mansfield, R. I.; Trumbull, Ct.; Madison and Plattsburg Barracks, Watervliet Arsenal, West Point, Jay, Hamilton, Niagara, Porter, Schuyler, Slocum, Terry, Totten, Wadsworth, Wood, H. G. Wright, N. Y.; Hancock, Mott, N. J.; Allegheny, Frankford Arsenal, Pa.; DuPont, Del.; Howard, McHenry, Washington, Md.; Washington Barracks, D. C.; Hunt, Monroe, Myer, Va.; Henry Barracks, San Juan, P. R., and also by Commissary, Post of San Juan, P. R., for delivery at San Juan of refrigerated beef required at all Porto Rican posts. Proposals will be received and opened at same time at respective points named for beef to be delivered at temperature not greater than 50 degrees Fahrenheit. Also proposals for fresh vegetables (potatoes and onions) required during SIX MONTHS, beginning July 1, 1904, will be received and opened at same time at Ethan Allen, Vt.; West Point, N. Y.; Monroe, Va.; Henry Barracks, San Juan, P. R. Information furnished on application to commissaries at respective places. Envelopes containing proposals must be marked "Proposals for Beef (or vegetables) to be opened April 30, 1904," and must be addressed to commissary at place to be supplied. EDWARD E. BRAVO, Lt. Col., Chief Com'y. April 2, 1904

QUERIES AND ANSWERS

(CONDUCTED BY M. D. SLIMMER, PH.D.)

If you are in doubt on any question appertaining to your business, ask us freely. If the question involves expert, technical or scientific knowledge it will be referred to a specialist. This column is yours. Address all communication to the Question Editor, National Provisioner, New York.

BLEACHING OF GREASE AND TALLOW.

In response to inquiries, Mr. Slimmer has prepared the following, covering the subject indicated:

The cheapest method of bleaching greases and tallow now in use is by means of chemicals. A number of such methods are being used by soapmakers, and give very satisfactory results. As a rule, every fat needs slightly different treatment in order to produce the best results at the least cost, so that it is advisable to first have a test made on a small scale as to the bleaching qualities of any particular samples.

The following formula works very well on the average product. For all purposes fats and oils are to be treated with chemicals and subsequently washed with water, a cone-shaped tank is the most convenient, as it enables one to drain the water off most thoroughly at the bottom. For a charge of 15,000 lbs. a cone-shaped cylinder 12 ft. high, 6 ft. in diameter, with a cone 3 ft. deep and lined with sheet lead is to be recommended, if much of this work is to be done. Ordinary wooden vats, such as are ordinarily found in any packing house or soap factory, will also do, especially if coated with asphalt on the inside.

Five thousand pounds of the grease to be bleached is placed into the tank, with 1,500 pounds of water and 6 pounds of potassium permanganate and 1 pound of sal soda dissolved in water added. The mixture which should have a temperature of about 100 degrees Fahrenheit, is well mixed for twenty minutes, by means of a powerful current of air. Eight pounds of sulphuric acid dissolved in 6 to 10 parts of water are now added, and after blowing for ten minutes longer, the mixture is well boiled by means of live steam and then allowed to settle. After thirty minutes the lower layer can be drawn off and the purified grease washed with a spray of clean water. After being well washed, the grease is boiled for about an hour with a very dilute solution of sal soda made by dissolving a half pound of sal soda in 500 pounds of water. This last boiling removes a great deal of the disagreeable odor from the product. If desired, this last washing may be omitted and the product treated directly with superheated steam. If this method is properly carried out under conditions suited to the particular product, decided improvements can be affected.

For some purposes, grease can be purified by the use of air alone. This has, however, a tendency to cause the product to become

more viscid and to take a somewhat rancid odor.

The following method, though it appears rather difficult to carry out, is said to do very well for the bleaching of soap stock. Oils that have been extracted by means of carbon disulphide from oil cake, tankage, etc., and which have a very disagreeable odor, a dark color, and a high percentage of free fatty acids, have also been successfully treated in this manner.

Fifteen thousands pounds of oil and 500 pounds of chloride of calcium, dissolved in as little water as possible, are placed into a tank and vigorously blown with air for ten hours. Two hundred pounds of sulphuric acid mixed with 200 pounds of water are now added and steam passed through the mixture another five hours. After this treatment the oil is said to be perfectly clear and odorless, but on account of the large percentage of free fatty acids, can be used only for soap stock.

As all of these methods of purifying oils depend upon the oxidizing action of either air or some chemical, attempts have often been made to use peroxide of sodium for this purpose. This reagent which can now be bought at reasonable prices, and which is being used extensively as a bleaching agent in many other industries, has also been used for bleaching fats and oils. Great care must be exercised in handling the same, as it is very explosive when mixed with organic substances. In a lead or copper tank provided with a stirrer 400 pounds of oil are heated to 70 degrees Fahrenheit. One pound of sulphuric acid, specific gravity 1.75, is added slowly, about fifteen minutes being taken for the operation. When the acid and oil are well mixed, one pound of sodium peroxide is slowly added, and the mixture stirred for 8 to 10 hours. After washing with warm water, and finally boiling up with fresh water, the product is greatly improved. The specific gravity of the acid used is of great importance, and should be especially determined for each case.

All of these methods of chemical bleaching can be combined with the use of Fuller's earth. The new methods now being introduced for renovating and purifying this product will undoubtedly make cheap grades of earth more readily available for bleaching purposes than at present.

WANTED AND FOR SALE.

Reference to page 48 may discover something of interest to you, whether you are employer or employee. Look it up.



EXPANDED METAL LOCKERS

Are built of sheet steel cut and expanded into open meshes. Material is very strong and rigid, will not sag, twist or warp.
These lockers are made in units to fit any sized or shaped space.
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FIRST PRINCIPLES OF REFRIGERATION.

When a body passes from a solid to a liquid, or from a liquid to a gas there is a thermodynamic change, a change brought about by heat in one case, or by the abstraction or absence of heat in another case. It requires a certain amount of heat to change ice into water, and a certain amount more to change that water into gas or steam. The opposite process requires a certain amount of cold, or abstraction of heat to convert the gas or steam into water and an additional amount of cold or abstraction of heat to convert that water into ice.

The Formation of Brine. When salt and ice or salt and snow are brought together, they act upon each other producing a solution or brine. In doing this heat is abstracted from surrounding substances producing a lower temperature or refrigeration in those bodies. This brine has a freezing point far below that of water.

Absolute Zero. The generally accepted point for absolute zero is about 460 degs. or 460 degs. below the zero of the Fahrenheit thermometer. This is supposed to represent the point where there is an absolute absence of heat, that is to say the point where the molecules of matter have lost all motion or equivalent heat. The amount of heat in a body is measured by the amount of energy possessed by its constituent molecules. A perfect gas under constant pressure expands 1-493 of its volume at the freezing point (32 degs. F.) therefore if it could be cooled down to a temperature of 493 degs. below the freezing point, or 461 degs. below zero its volume would be represented by zero.

Specific Heat of a Gas. The specific heat of a gas when expansion takes place and mechanical work is done is higher than the specific heat of a gas that is not permitted to expand. Therefore the specific heat of a gas with constant pressure is greater than the specific heat of gas with constant vol-

D

XON'S GRAPHITE PIPE JOINT COMPOUND
will make a steam, air or water-tight joint, will resist heat, cold, acids or alkalis, will remain soft indefinitely, enabling joints to be separated with perfect ease and without injury to pipe or tools.
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West Washington Market, West and Bloomfield Streets
Thirteenth Street Market, 32-34 Tenth Avenue
Manhattan Market, W. 35th Street and Eleventh Avenue

BROOKLYN

Williamsburg Market, 100-102 North Sixth Street
Brooklyn Market, 182-184 Ft. Greene Place
Atlantic Avenue Market, 74-76 Atlantic Avenue
Ft. Greene Sheep Market, 172 Ft. Greene Place

West 39th Street Market, 668-670 West 39th Street
Westchester Avenue Market, 769-771 Westchester Avenue
West Harlem Market, 130th Street and Twelfth Avenue
Eleventh Avenue Market, Eleventh Avenue, bet. 34th and 35th Streets
Murray Hill Market, Foot East 31st Street
West Side Slaughter House } 664-666 West 39th Street
West Side Market }

JERSEY CITY

Wayne Street Market, Corner Wayne and Grove Streets
Ninth Street Market, 138 Ninth Street

Swift & Company New York

Central Office, Nos. 32-34 Tenth Avenue

ume. The specific heat of air at constant pressure is 0.2379. The specific heat at constant volume is 0.16866.

Specific Weight. The specific weight of different bodies is their relative densities, and is expressed in terms of their specific gravity. The specific gravity of a body is found by dividing the weight of the body by the weight of an equal volume of water. Bodies vary greatly in density, as equal amounts of matter do not occupy the same space.

Solid, Liquid and Gaseous Matter. Matter is solid when its form is not changed by

the containing vessel. It is liquid when it can be poured or when it permits a change of form in the containing vessel. It is gaseous when it has a nearly unlimited tendency to expand and can be greatly compressed, the molecules possessing a large freedom of motion.

Expansion and Contraction. Nearly all bodies expand when heat is applied and contract with cold, but ice is an exception.

The Boiling Point. The boiling point of a liquid is that point at which it will take on a gaseous form without regard to the pressure.—The Engineers' List.

LIVE STOCK IMPROVEMENT IN RUSSIA.

There appears to be a vigorous movement in favor of the development of beef production in Russia, and particularly in Siberia. But the native herds, as a rule, need grading up by the use of pure-bred bulls before the quality of the meat will be satisfactory. A Berlin report states that efforts are being made to open a market for Siberian beef in Germany. At first only salted meat will be sent; but it is expected that it will bring about an improvement in the agricultural outlook, and lead to a greater firmness in the live stock trade.

Swift & Company



138-154 Ninth Street, JERSEY CITY

Beef and Pork Packers

Lard Refiners and General Provision Dealers
For Export and Local Trade

FOR PURCHASING DEPARTMENTS

BURT KEEPS IT UP.

A large plate glass factory at Alexandria, Ind., has placed an order with the Burt Mfg. Co., for three 16-inch exhaust heads.

A RECORD-BREAKING ORDER.

The largest recent order for insulating paper was placed with F. W. Bird & Son, of East Walpole, Mass., for over four million square feet of their Neponset brand.

BUCKEYE MACHINERY USED EVERYWHERE.

The Buckeye Iron & Brass Works, of Dayton, Ohio, who are very large manufacturers of linseed and cottonseed oil machinery, have recently taken a contract from the Minnesota Linseed Oil Company, Minneapolis, for a 12-press linseed oil mill. This machinery is modern and up-to-date in every respect. The Buckeye seems to have a cinch with the linseed oil people of this country, as their machinery is in use in all the largest modern mills.

STURTEVANT'S TESTING APPARATUS.

One of the most interesting features of the new plant now being erected by the B. F. Sturtevant Co. at Hyde Park, Mass., is an elaborate testing plate for its engines. With an output of a thousand engines or more per year this is the essential climax of a careful system of manufacture and testing.

The plate, or more properly the plates, will be supported upon a series of heavy parallel walls, between which steam and exhaust pipes are carried, so that at almost any point in the entire area of the floor, measuring about 30 ft. by 60 ft., steam and exhaust connections may be made to any engine. Testing facilities will be provided, and a transfer crane over-head will make it very simple to locate or remove the engines. The same crane will transport them to the packing department, and thence load them directly upon cars which traverse the end of the building.

SPECIAL VENTILATING SYSTEM.

The proper ventilation of gassing rooms is of importance to the textile manufacturers, as, in the process of singeing the threads over the gas machines, the room becomes saturated with gases and fumes, and without some positive means of ventilation the room would be uninhabitable. For some time these rooms have been ventilated by disc or propeller fans placed in the walls, but by this method the operators were able to work in the room only about an hour at a time.

Recently, however, the B. F. Sturtevant Co. solved the problem, and the fan system of ventilation which they are now installing enables the employees to work comfortably in the room at all times. With this system the air in the room is changed at short intervals by means of a fan which draws fresh air from out of doors, forcing it into the room through well-distributed openings, while the smoky air is exhausted to the outside. A recent installation of this kind was that by the B. F. Sturtevant Co., of Boston, Mass., at the Arlington Mills, Lawrence, Mass.

INDUCED DRAFT INSTALLATION.

As the practical economy and general utility of mechanical draft becomes better understood, we find it is being more generally adopted in all classes of modern power plants. Every engineer understands the low efficiency and executive first cost of a high stack, and it has gradually been supplanted by the less expensive and more economical fan. The modern hotel with its complex mechanical equipment requires apparatus which will produce strong draft under all weather conditions, with the highest efficiency and without smoke. It is unquestionable that a high stack will produce good draft with favorable weather conditions, but at best it has very low efficiency, and the smoke nuisance ever present is no small matter for consideration about such buildings. Mechanical draft fulfills every requirement of a stack, and many more, at much less expense.

The accompanying cut represents an induced draft plant recently built by the

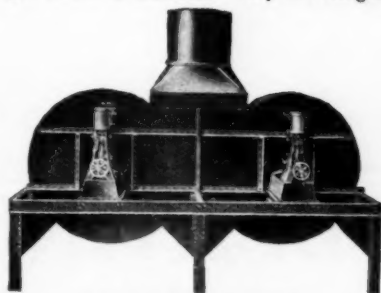


WHERE PLANT WAS PUT IN.

American Blower Company, of Detroit, for the Hotel Royal Poinciana, Palm Beach, Florida, this being the third plant of this character built by that company for the Florida East Coast Hotel Company, under the supervision of Mr. Wm. R. Kenan, Jr., consulting engineer, of Lockport, N. Y.

This apparatus is mounted on a steel platform in the boiler room above the floor, to save floor space, and consists of two fans placed end to end and both delivering into a sixty inch steel stack, which extends through the roof only, twenty-two feet above the fan outlets.

Each of these two fans is known as a one hundred and sixty inch fan, with a special full housing and a wheel one hundred and eight inches in diameter. They are designed



THE A. B. C. APPARATUS.

to furnish draft for five seventy-eight inch by eighteen foot horizontal tubular boilers, and one seventy-eight inch by twenty foot of same type; the eighteen foot boilers have a grate area of thirty-nine square feet each, the twenty-foot boiler an area of forty-two and one-quarter feet. The boilers carry a steam pressure of one hundred and twenty pounds, the fuel being buckwheat anthracite. Each fan is designed for a normal speed of two hundred and fifty revolutions per minute, but can be speeded up to three hundred

revolutions per minute, and at the maximum speed the two fans will produce sufficient draft to force the boilers fifteen per cent. over their rated capacity. The apparatus is designed for a normal draft of 1.5 inches of water, and a maximum pressure of two inches. At normal speed each fan handles twenty-two thousand cubic feet of gases per minute at a temperature of five hundred and fifty degrees and under these conditions each fan requires ten brake horse power for its operation.

The fans are operated by the American Blower Company's direct connected high-speed vertical engines. These engines have cylinders seven inches in diameter by seven stroke, and are of the balanced piston-valve crank-center type. The wheel of each fan is overhung on the end of the engine shaft. The engines have large wearing surfaces, and an improved system of lubrication which permits of long and continuous runs with little attention. The crank shafts are of forged steel, and turn in long and well bab-bitted bearings. To each engine is attached an automatic regulating valve which increases the fan speed, and resulting draft as the steam pressure falls, and vice versa, decreases the speed as the pressure rises.

The stack is made of No. 10 sheet steel, and is arranged so as to be self-supporting on the outlets of the fans. The steel platform supporting this outfit is built of six vertical eight inch I beams, with a superstructure of ten inch and six inch I beams.

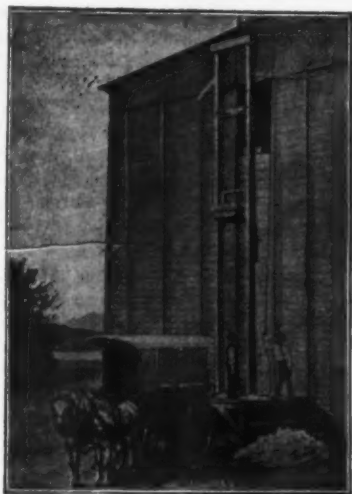
This plant has given most excellent results, and is fairly representative of the latest practice in this very important branch of modern power plant equipment.

NEW PATENTS.

754,296. Water Filter. Samuel E. Foreman and Richard T. Lightfoot, Paducah, Ky. A filter, a casing comprising an upper and a lower section having engaging threaded flanges, said upper section being provided on the under side of the top thereof with radial ribs merging into an escape-opening, in combination with a filtering-stone permanently secured in the flanged upper section and spaced from the bottom of the lower section of the casing, an inlet and an exit for unfiltered water in the bottom of said lower casing, and a rotary cleaning device normally supported upon the bottom of said casing and having an operating-stem extending through and bearing in the latter and provided with a handle.

754,053. Filtering Material. Samuel G. Derham, Cincinnati, Ohio. An improved article of manufacture, a filtering fabric composed of a plurality of alternate layers of textile fabric, and filtering paper, with an intermediate layer of cotton wadding contiguous the filtering paper, the whole united and bound together by stitches over the entire face of the fabric.

753,880. Water-Purifying Apparatus. John C. W. Greth, Pittsburg, Pa., assignor to Wm. B. Scaife & Sons Company, Pittsburg, Pa., a corporation of New Jersey. A water-purifying apparatus, a saturating tank provided with a series of partitions attached alternately to the bottom and to the top respectively, and open near the opposite side, so as to cause the water flowing through the tank to take an inverse upward and downward course and means for introducing the chemical at the bottom of the compartment therein.



ICE ELEVATING —AND— LOWERING MACHINE

Operated by Horse Power.

Suitable for filling large ice-boxes and for use at Packing Houses.

Readily moved from one door to another.

Write for Catalogue and Price-List, illustrating and describing all modern methods of handling ice.

GIFFORD BROS.
HUDSON, N. Y.

ESTABLISHED 1814

ICE AND REFRIGERATION

CORPORATION NEWS.

East St. Louis Dairy Company, East St. Louis; capital \$20,000. C. M. Forman, Charles M. Akins and James E. Walker, incorporators.

Blaine Creamery Stock Company, Milwaukee, Wis.; capital \$2,500. William Ward, George Howe and William Brunker, incorporators.

Lynn Creamery Association, Lynn, Mass.; capital \$5,500. R. J. McMurray, Edwin Corrie and others, incorporators.

Floresville Creamery Co., Floresville, Texas; capital, \$5,000. J. V. Blake and others, incorporators.

Luick Ice Cream Company, Milwaukee, Wis.; capital \$18,000. Frank Luick, William Luick and others, incorporators.

Purity Ice Company, Elizabeth City, N. C.; capital \$100,000. W. J. Woodley, W. T. Love and W. E. Duston, incorporators.

Gate City Ice Company, Greensboro, N. C.; capital \$50,000. A. T. Armstrong, J. R. A. Powers, I. R. Donnell and others, incorporators.

Hamilton Ice and Cold Storage Company, Chattanooga, Tenn.; capital \$75,000. R. B. Henderson, J. B. F. Lowry and others, incorporators.

Purity Ice Company, Springfield, Mass., has been incorporated by Bennett A. Fowler, Fred C. Fowler and others.

NEW PLANTS.

Selbyville, Ky.—Briggs & O'Leary will build a 50-ton ice plant.

Kansas City, Mo.—Imperial Brewing Company will install a 60-ton ice plant.

Middle Cove, Newfoundland.—Simon Roach will build a cold storage plant. Jonas Baxter is architect.

Sioux City, Ia.—Beatrice Creamery Company, Lincoln, Neb., will build a cold store.

West Palm Beach, Fla.—The East Coast Electric Light, Power and Ice Company will enlarge plant.

Tower City, N. D.—J. L. Blunt, of Garner, Ia., is forming a company to build a creamery.

Fall River, Mass.—Old Colony Brewing Company will build a cold storage plant for public use.

Richmond, Va.—Eureka Ice Company will enlarge its plant.

Rockdale, Tex.—L. H. Potter will build a creamery.

Jackson, Ala.—B. H. Warren will build an electric light and ice plant. Wants bids on ice machinery.

Sealed bids will be received at the office of Secretary of State, in Lincoln, Neb., up until 12 o'clock noon of April 4, 1904, for the erection and completion of a cold storage building at the Feeble Minded Institute, in Beatrice, and hospital building, in Milford, according to plans and specifications now on file in the office of Commissioner of Public Lands and Buildings. The board reserves the right to reject any and all bids.

Rocky Mount, N. C.—Southern Ice Company will immediately rebuild its ice factory, recently destroyed by fire.

Carrollton, Ga.—James G. Cheney and C. R. Turner will build an ice factory.

Detroit, Tex.—J. B. Mathis and J. T. Jones will build an ice plant.

Lewiston, Idaho.—George C. Goldman will build a cold storage and ice plant.

Camden, N. J.—Goelle, Speth & Co., Philadelphia, Pa., are the architects for the new \$200,000 brewery.

FRESH AND COLD STORAGE BUTTER.

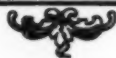
There has been a decided improvement in the butter market the last week, and the holders of cold storage goods have seen a ray of hope in the situation. Fresh goods were kept well cleaned up, and the demand was so great that an advance of one cent was the result. The railroads have been more or less crippled on account of spring floods, and arrivals of fresh butter have been uncertain. Prices in New York March 30: Creamery, extras, 25c; do. firsts, 20@24c; do. seconds, 17@19c; do. thirds, 15@16c. Creamery, held extras, 20@21c; do. firsts, 16@19c; do. seconds, 15@15½c; do. thirds, 14@14½c. State dairy, firsts, 19@21c; do. seconds, 15@17c. Western factory, held, 12@14c. Packing stock, held, 12@14c.

In Boston there was little change from last week's quotations, and the advance in New was not in evidence. The best quotations for extra Vermont were 23@23½c; firsts, 17@21c.

In Philadelphia the market showed improvement. Western creamery, extras, 25½c; do. extra firsts, 24½@25c; do. firsts, 22@24c. Held creamery, 15@20c. as to quality. In Chicago the market was firm on March 30 at 24½c.

GIANT INSULATING PAPERS

STANDARD FOR EIGHTEEN YEARS



POSITIVELY SUPERIOR TO ALL
OTHER INSULATING MATERIALS

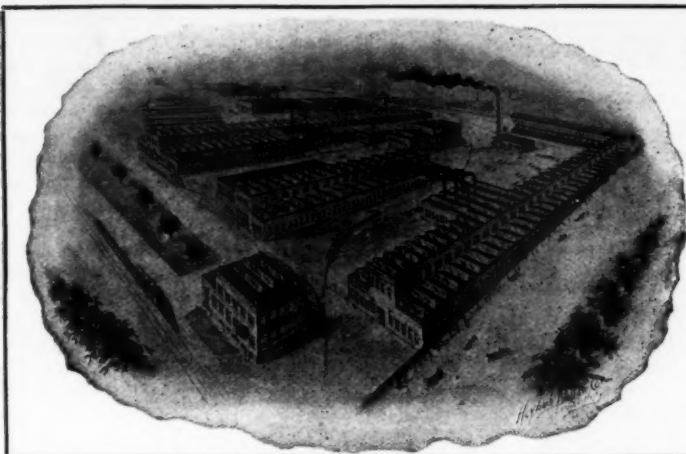
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Manufacturers

THE STANDARD
PAINT COMPANY

CHICAGO OFFICE,
188-190 Madison Street

100 William Street
NEW YORK



Henry Vogt Machine Co.

**ICE and REFRIGER-
ATING MACHINERY**

Louisville, Kentucky.

FRESH AND REFRIGERATOR EGGS.

Market conditions in New York during the last week have been unusual for this time of the year. The approach of Easter and the Jewish Passover has called for quantities of eggs, and outside consumption has greatly increased. More than 160,000 cases have been received in a week and a half, and in spite of that fact there has been a liberal clearance. Even some of the goods that went into the coolers have been taken out again. About 10,000 cases are reported as having been stored in local refrigerators. Prices under these conditions have been maintained and a slight advance over last week's report has been quoted.

The "New York Produce Review" gives some figures which will be interesting as a comparison of prices for the last ten years, also a summary of the situation as follows:

Year.	Storage Packed.		Refrigerator Best Grade.				
	Apr.	May.	Sept.	Nov.	Jan.	Feb.	
1903-4.....	15%	16%	20	23½	28½	..	
1902-3.....	16%	17%	20½	20%	20%	14%	
1901-2.....	14%	13½	17%	18%	22½	..	
1900-1.....	12%	13	16%	18½	18½	16%	
1899-0.....	13½	14%	17½	16½	14%	10%	
1898-9.....	10%	11%	14%	19½	17%	16	
1897-8.....	9%	10%	14%	17½	16½	14%	
1896-7.....	11%	10%	14%	17½	15%	11	
1895-6.....	13	13½	15%	17½	16	9½	
1894-5.....	11½	11%	16%	21	19%	23%	

**NEPONSET
AND
LAMINOID
INSULATING
PAPERS**

W. BIRD & SON - ESTABLISHED 1817
EAST WALPOLE, MASS. - NEW YORK - CHICAGO

"It is rather interesting to note that the average price of best refrigerator eggs in September has always shown a profit over the prices paid in the previous April and May, and that in every instance above noted, except one (1899), the November average has been higher than the September average. This is quite natural, for it would very rarely happen that any one would begin to unload storage holdings at any loss at the beginning of the unloading season; even when the situation is inherently unhealthy at that time the position is not sufficiently developed to make it apparent, and in September it is always the offering of storage reserve which limits the natural upward tendency of prices. It is quite natural also that November—which is perhaps the month of naturally lightest egg production—should usually see some advance in the level of storage egg values, even though later developments may prove disastrous to remaining stocks—for there is always the possibility of a hard winter ahead. But it will be noted that in six of the ten years above cited the January average was lower than the November average and in only two was it any higher. In four of the years mentioned above there was a very bad wind-up at heavy losses. In considering the above figures it should be remembered that they represent the average of the *highest grade*; the average quality being below the value of the best the figures would have to be let down somewhat to indicate average results."

Prices in New York March 30: Nearby fresh gathered, extras, 20c.; do. firsts, 19½c. Western storage packed, firsts, 19½c.; do. firsts, 19½c. Southern, 18½c. @ 19½c.

In Boston the market sympathized with New York, and prices were about the same. Buyers for storage are waiting until after Easter. About 2,000 cases went into the coolers, at about 16½c.

In Philadelphia, receipts were liberal, but the demand was heavy and prices were higher. In Chicago, the same conditions prevailed, and extra fresh were quoted at 18c.; firsts, 17c. on March 30.

CONNECTICUT ICE DEALERS.

The annual meeting of the Connecticut Ice Dealers' Association was held last week at New Haven, delegates from many parts of the State being present. President Charles R. Vaill, of Waterbury, presided. Several interesting papers were read, and the following officers were elected: President, Charles R.

Vaill, of Waterbury; vice-president, George E. French, of New Haven; secretary, W. R. Perry of New London; treasurer, George H. Charter, of Hartford; assistant secretary, C. L. Beach, of Bridgeport.

COLD STORAGE FOR MEXICO.

It is reported that the cold storage enterprise which is on foot in the republic of Mexico has a capital of \$2,000,000, which it is prepared to expend on plants which it intends to erect in the city of Mexico and other cities under the concession secured from the Mexican government. Cold storage is badly needed in Mexico, and the company is receiving encouragement on all sides for the speedy forwarding of its plans.

STORAGE PLANT AT MANILA.

The United States has a cold storage plant in Manila that is without an equal. It holds 1,200 tons of beef, 200 tons of mutton, 50 tons of butter, 100 tons of potatoes, 100 tons of bacon, etc., or sufficient of the necessities of life to feed well an army of 10,000 men for three months. Besides its mere storage capacity, it has an ice plant, with a daily output of 40 tons.

W. H. BOWER, General Manager. GEORGE R. BOWER, Secretary and Treasurer.

**The AMMONIA CO.
OF PHILADELPHIA**

Gray's Ferry Road and Twenty-ninth Street
PHILADELPHIA, PA.

26° AQUA

Especially Refined and Purified for
ABSORPTION MACHINES

ANHYDROUS

ALWAYS PURE

ALWAYS DRY



BOWER BRAND
99-998% Pure.

**DISTILLED FROM PURE
AQUA AMMONIA OF OUR
OWN MANUFACTURE**

FOR REFRIGERATING AND
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Co., 100 William Street.
CHICAGO: F. C. Schapper, 16 N. Clark Street.
CIN. JINNATI: C. P. Calvert, 9 E. Pearl Street.
M. WAUKES: Central Warehouse.

406 Century Bldg.

PROVISIONS AND LARD

Weekly Review

All articles under this head are quoted by the bbls., except lard, which is quoted by the cwt., in tcs., pork and beef by the bbl., or tierce, and hogs by the cwt.

Firmer Conditions Followed by Weakness Chiefly on Larger Hog Receipts—Long Holdings Still Coming Out—More Than Usual Sympathy With the Grain Markets—Larger Consignments of Lard—Home Consumption Slightly Improved—The Close Strong.

The market does not get away in a material degree from the late order of prices, although it is at present weak on larger receipts of hogs. While there had been frequent changes to slightly better prices they were met by a selling movement which crowded them back to essentially the basis from which they had started, while finally the feature of delayed hogs arriving freely sent them to an ever weaker range.

The narrowness of the market has been shown in that it oftener than usual fluctuated with the grain situation, although on Wednesday and Thursday with grain a little stronger most of the time the products were easier, because of the dull demands for them, as well as from the then larger receipts and lower prices for hogs. But no very marked declines occur at any time in the prices of the products, and the close of Thursday's market was a strong one.

There had been for several days up to the beginning of this week somewhat improved

feeling for the hog products and many traders had hopes that they were becoming arranged for a steadily firmer price.

But on the slightest influences for weakness and as they were shown, especially at mid-week, as in the increased hog supplies at the packing points the turning market brought out a good deal of long selling of lard, pork and ribs, especially of pork.

It has been astonishing the extent of the "long" interest, that has held on to its May and July deals, since the break began in prices, about four weeks since. The expected ordinary reactions from depression failed to come about.

It is the selling of disgusted "longs" through commission houses that takes the temper out of the market, especially as there are no signs of revival of other demands; the cash trade is careful in its movements, while not replenishing supplies beyond actual needs.

There is lack of snap in outside speculation. But few new buying orders come in and these are mainly pork and ribs; the lard products hang to a lifeless speculation beyond covering contracts or in closing out deals.

Yet unquestionably the cost of hogs considered the products are cheap. As a good deal of difficulty is had in getting down the prices of hogs even upon days when there are more than ordinary supplies of them, it would seem as if ultimately the products situation must turn stronger.

The larger supplies of hogs just at present do not imply a volume of supply of more than an ordinary order for the future; the little rush forward of this delayed stock will soon be over.

Indeed, the reports and other indications would point to hog supplies up to, and perhaps into, May, of only fair and not at all excessive proportions.

The further advanced the season the clearer the point is that hogs had been rapidly marketed through the winter season, and as they then came up to marketable condition, and that the high corn and cheap hog prices were the reasons for the prompt marketing of the hogs. The weight of the hogs now arriving show continued indisposition to hold hogs for feeding; thus last week at Chicago the average weight was only 204 lbs., in the previous week it was 206 lbs.; corresponding week in 1903, 218 lbs., and in 1902, 215 lbs.

It is hard to come to a conclusion other than at some time before the summer months, more particularly after the May option is out of consideration, that the products ought to be better property.

The considerable loss of production from the light weights of the hogs that have been received should enter at some time as a factor, since consumption would appear to be quite as free of the hog products right along, and which feature must call for much more extensive resupplying by distributors when they are assured that market conditions are fully settled.

The Chicago stocks of lard are not as yet made up; it is doubtful, however, if within the last two weeks that the stocks have grown in a material way of lard, however

THE W. J. WILCOX

LARD AND REFINING COMPANY

NEW YORK
OFFICES: 27 Beaver Street

Refiners of the Celebrated
Wilcox and Globe Brand

PURE
REFINED
LARD



CARROLL S. PAGE, HYDE PARK, VT.

Green Calfskins, Country Hides, Sheep
Felts, Tallow, Bones.
Wool Puller and
Tallow
Renderer | Manufacturer of
Page's Perfected
Poultry Food

Make Your Own Fertilizer

at Small Cost with
Wilson's Phosphate Mills
From 1 to 40 H. P. Also Bone Cut-
ters, hand and power, for the poul-
trymen; Farm Feed Mills, Gra-
ham Flour Hand Mills, Grit and
Shell Mills. Send for catalogue.
WILSON BROS., Sole Mfrs.,
Easton, Pa.

larger they will show as against the state-
ment of March 1, since there has been a large
outward movement of the lard latterly, chief-
ly in the way of consignments, although
partly on demands.

There are some consuming sources both in
Europe and this country buying lard prompt-
ly at every small concession for it, and as
regarding its market conditions as quite sat-
isfactory, considering the hog situation.
There are other distributors, a sufficient num-
ber of them, to give decided animation to
the market when they get ready to buy and
because they have held off the market for
so long a time that their holdings are much
reduced.

Moreover, now that the Lenten season is
over, in all probability the general cash busi-
ness in the products will steadily improve.

The West is getting more of a trading in
meats with the South and a slow growth of
buying orders from our eastern markets.

The export movements last week reached
fully 15,077,183 pounds lard, or nearly 3,000-
000 pounds more than in the corresponding
week of the previous year, and which were
12,199,929 pounds; but of meats a less vol-
ume was taken, or 11,404,498 pounds and 14-
973,775 pounds, respectively; and of pork
only 3,344 bbls., against 4,247 bbls. same
week last year.

In New York prices of mess pork are low-
er, now at \$14.75@15.25, with 300 bbls. sold;
short clear has had sales of 250 bbls. at \$14
@16, and 100 bbls. family at \$15.00. City
lard has sold for export at \$6.50 for 250 tes.
Western steam lard is at about \$7.15, and
has little demand here, with 750 tes. sold for
export, on p. t. City meats are slow and
the market prices are rather easier; 12 lbs.
ave. pickled bellies quoted at 7½¢, and 14
lbs. ave., 7¼¢, with 10 lbs. ave. at 7¼¢@8¢,
and smokers at 8¼¢. Loose pickled should-
ers have sold at 6¼¢@6½¢ for 2,500, and
loose pickled hams at 9½¢@10¢ for 3,500.

BEEF.—English demand continues dull,
and the local distributing business of a nar-
row order; prices rather favor buyers; city
extra India mess, tes., \$15@15.50; barreled,
mess, \$9; packet, \$10@10.50; family, \$11@
\$11.50.

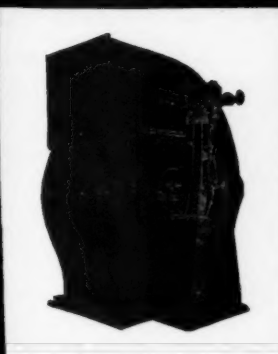
PRODUCE EXCHANGE NOTES.

Both the New York Produce Exchange and
Chicago Board of Trade were closed yester-
day (Good Friday).

William B. Jerolamon (Nelson Morris &
Co.) was proposed for membership.

Visitors: Clement Scott, Edinburg; E. L.
Simmons, London; H. T. Tompkins, Liver-
pool; A. C. Wieland, Montreal; W. D. Judd,
St. Louis; J. H. Van Arnam, Toledo; J. S.
Smith, Kansas City; Otto G. Malkow, W. B.
Jerolomon, S. J. McGierran, Wm. H. Mayer,
O. C. Snyder, H. N. Matthews, Chicago.

Memberships about \$225.



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**HEATING
VENTILATING
DRYING
MECHANICAL DRAFT
APPARATUS**

FANS AND BLOWERS FOR ALL PURPOSES

CATALOGUES ON REQUEST

AMERICAN BLOWER CO

DETROIT, MICH.

NEW YORK

CHICAGO

LONDON

HIDES AND SKINS

(Shoe and Leather Reporter.)

CHICAGO.

	1904.
Native steers, spready.....	11¼ @ —
Native steers, heavy.....	10½ @ 10¾
Native steers, light.....	9½ @ 9¾
Texas steers, heavy.....	11¼ @ 12
Texas steers, light.....	10¾ @ 11
Texas steers, ex. light.....	9¾ @ 10
Butt-branded steers.....	— @ 10
Colorado steers.....	9¾ @ 10
Native cows, over 55 lbs.....	— @ 9¾
Native cows, under 55 lbs.....	— @ 9¾
Branded cows.....	9½ @ 9¾
Native bulls.....	— @ 8½
Branded bulls.....	— @ 7½
Pates, per 100 lbs.....	— @ 85
Trimnings, per 100 lbs.....	— @ 75
No. 1 heavy steers.....	— @ 9¼
No. 2 heavy steers.....	— @ 8¼
Side-branded steers, flat.....	8 @ 9
Side-branded cows, flat.....	7½ @ 8
No. 1 heavy cows.....	— @ 8¾
No. 1 buff hides.....	— @ 8¾
No. 1 ex. light hides.....	— @ 9
No. 2 buff hides.....	— @ 7¾
Bulls, flat.....	7½ @ —
No. 1 calfskins.....	12¼ @ 13
No. 1 kips.....	9½ @ 10½
Deacon skins, each.....	65 @ 85
Slunks, each.....	40 @ 60
Horsehides, each.....	\$3.55 @3.60

Sheep Pelts.

Green salted pelts, p'ker lambs.....	1.25 @1.32½
Green salted packer sheep.....	1.35 @1.50
Green salted country pelts.....	85 @1.25
Dry pelts, Montana, butchers' full woolled.....	12 @ 12½
Dry pelts, Utah butchers' full woolled.....	11¼ @ 12
Dry pelts, Wyoming butchers' full woolled.....	— @ 12
Dry pelts, Colorado and New Mexico butchers' fair run.....	— @ 11
Dry flint shearlings, good stock.....	10½ @ 11
Dry flint shearlings, damaged.....	3 @ 7
Dry murrains, Montanas and Utahs.....	12½ @ 12¾
Dry murrains, Colorados.....	11 @ 12

BOSTON.

Dry—Selected.

California.....	21 @25..19 @—
Southern.....	..13 @14

Russian Sheep Casings.

EXPORTERS

HABERKORN BROS.,

ADRIALITATSTRASSE,
Hamburg, Germany,
Importers of all kinds of

American Sausage Casings.

San Antonio.....	..18 @—
Texas.....	..21 @28..17 @17½

Salted.

Brighton, abattoir steers.....	9¼ @—
Do., abattoir steers, butt branded.....	— @ 8¼
Do., abattoir cows.....	8½ @—
New England cows, green.....	6 @ 6¼
New England cows, salted.....	8 @ 8½
New-England steers, salted.....	9 @—

Wet Salted.

Southern.....	..35 @40.. 7½ @ 7½
Texas ox and cow.....	..60 @70.. 7¼ @ 7½
Western cows.....	8½ @ 8¾
Western, seconds.....	7½ @ 7¾
Extremes.....	8½ @ 8¾
Extremes, seconds.....	7½ @ 7¾

Calfskins.

Dairy.....	60 @ 65
4 to 5 lbs.....	80 @ 85
5 to 7 lbs.....	95 @1.00
7 to 9 lbs.....	\$1.25 @1.30
9 to 12 lbs.....	1.60 @1.65
12 to 16 lbs.....	1.85 @1.95
16 to 25 lbs.....	2.20 @2.25

NEW YORK.

Selected.

City natives—60 lbs. and over.....	9¾ @10¼
City butt brands—60 lbs. and over.....	— @ 9¼
City Colorados—60 lbs. and over.....	— @ 9¼
City bulls—all weights.....	8 @ 8¼
City cows—all weights.....	9 @ 9¼

City Calfskins.

5-7.....	..\$1.10 @1.12½
7-9.....	1.40 @1.42½
9-12.....	1.65 @1.67½

Country Calfskins.

5-7.....	..95 @ 97½
7-9.....	1.25 @1.27½
9.....	1.55 @1.60

TALLOW, STEARINE, GREASE and SOAP

Weekly Review

TALLOW.—While the market prices have not changed for the week and that, in the early part of the week, that the western situation was perhaps a little steadier, yet the position does not look as emphatically firm, and for the following reasons:

That the lard market is still in poor shape; that there is want of animation to it, and that the dulness and unsettled feeling over its near future prices keeps the compound lard business quiet; moreover, that the situation of the lard market abates buying interest in associated fats; therefore, that tallow has rather quiet demands from the consuming interests, although there is, perhaps, a little more demand for it this week than in the preceding week.

It has been contended that because of the for two or three weeks conservative buying of the soapmakers of tallow and the general outlook of the lard market, that tallow has been prevented from going easier only because the English markets were holding firm, and that the market here was near or practically upon an export basis. But the Wednesday's sale for tallow in London would show some easing up in the tone there, as 3d. decline was accepted on the beef grade, although the mutton grade did not vary in price. This small decline was significant only in that it showed a relaxation of firm views there. It was not the decline in a degree to affect the markets here. Nevertheless, it looks as if the tallow position, with the close of the week, was losing some of its independent tone, and because of the outlined features.

The fact that cotton oil has declined lat-

terly in price from its top figures of the season fully 5c. per gallon has no effect upon the tallow situation, since the oil is even now too high to draw demands from tallow, while the consumption of the oil by the soapmakers is chiefly where the oil is necessary to use for special use, as distinct from demands that float to cotton oil when its prices are favorable as against those for tallow.

There has been only one sale of city, 50 hhds., which was for export, this week, and at 4½c., and 4½c. is still quoted in a nominal way, while there are other bids of 4½c., and one seller at 4½c., and others asking 5c. City, in tierces, is quoted nominally at 5½c. Edible, city, has been sold at 5 11-16@5½c. for small lots, but for larger lots bids are lower.

The out-of-town tallow arriving here is not of large enough volume to accumulate materially, as it is rather promptly taken up by soapmakers; but there are larger lots in the interior seeking bids, and the buying interest in it comes out at easy, unsatisfactory prices. Sales of 240,000 lbs., in lots, for the week at 4½@5½c., as to quality.

At the west prime packers were sold at 5¼c., and this shows a little more steadiness, since it has been before asked, with 5¼c. bid.

OLEO-STEARINE.—The compound lard makers keep very quiet, and there is not enough doing in the stearine to make market prices for it. With the easier tendency of lard the pressers offer to sell at 6¼c., and have 6¼c. bid. The prolonged slowness of the compound makers in buying the stearine does not mean that the stocks of it are piling up liberally, since the make is more moderate than usual, as a good deal of oleo stock is now being made for export. Chicago quotes a quiet market for the stearine, with 6¼c. asked.

LARD STEARINE.—Lard refiners wants

are small; because of the slack demands prices are relatively low with the cost of lard. Quoted at 7½@7½c.

COTTONSEED STEARINE.—Not enough business to establish a price about 5½c. per lb. quoted.

LARD OIL has very little attention of consumers, who buy more to cover some actual need. Prices are unsettled with lard. Quoted at 60@61c.

GREASE STEARINE.—Stocks are moderate and slow of sale; prices easy; yellow, 4½c.; white, 5¼c.

OLEO OIL.—There is little business in Rotterdam, and a generally moderate trading; prices unsettled. Rotterdam quoted 48 florins. New York quotes choice, 8c.; prime, 6¾c.; low grade, 5½c. Neutral lard 8c. here and 7¾c. at the West.

GREASE.—Buyers have a slight advantage, on a dull condition of business and some increase in the supplies. Yellow, 4½@4¾c., and sales at 4¼c.; house, 4¼@4¾c.; bone, 4¾@4¾c.; B white, 4¾@4¾c.; A white, 5¼@5½c.

CORN OIL.—The mills still talk to \$4.40, but there are limited quantities from second hands still being obtained at \$4.15.

PALM OIL has only a small business, and, naturally, on the full prices against those of other soap materials; red, 6@6¼c.; Lagos, 6½@6¾c.

NEATSFOOT OIL.—A few small lots of high cold test are being exported. Most of the business, however, is in small lots for home consumption: 20 cold test, 98c.; 30 cold test, 85@86c.; 40 cold test, 67c.; prime, 54c.; dark, 47@48c.

COCOANUT OIL.—As the arrivals latterly have been chiefly to consumers direct, on old buying orders, the surplus offerings are not excessive; therefore there is a firm market. Ceylon, spot, 6½@6¾c.; do., April and May arrivals, 6½@6¾c.; April and July shipments, 6¼@6¾c.; Cochin, spot, 7¼@7¾c.; April arrivals, 7½@7¾c.; March and May shipments, 6¾c.



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New York City

COTTONSEED OIL

Weekly Review

THE NATIONAL PROVISIONER is an official organ of the Interstate Cottonseed Crushers' Association, and the official organ of the Oil Mills Superintendents' Association of the United States.

Steadier Conditions—Reserved Offerings—Light Trading—Little Speculative Inquiry—Home Consumption Still Less Than Usual and Compound Makers' Demands Light—Small Export Inquiry.

The market is in strong contrast to that of the previous week, as relating to the New York trading, in that it is now quiet, although firmer, while in the previous week there had been marked activity on a pressure to sell at the then steadily declining prices. There is now very little desire to sell at better held prices.

When on the closing day of the previous week, 7,300 bbls. prime yellow were sold for July at 36 $\frac{1}{4}$ c., 300 bbls. for May at 35 $\frac{3}{4}$ c., and 1,000 bbls. June at 36c., and when 35 $\frac{1}{4}$ c. was the best bid for March and April it marked the culmination of extensive selling in New York of one or two of the leading companies and some others which had given for two weeks before this week surprising activity in a speculative way in the prime yellow grade trading in New York.

Within the fortnight mentioned there were quite 60,000 barrels contract oil sold in New York, as covering all deliveries from March to July, chiefly May and July, and including as well one or two lots for September. All of these sales had been reported as to particulars in our previous weeks' review and are mentioned now only as showing striking comparisons in trading to the inertia of this week, and that it may be borne in mind that there is now just so much oil being carried by general speculative interests, and that the holdings of the refined oil by the large operators are to the liberal extent of their late selling, now diminished, and as the amounts have been placed to others willing to carry them.

Indeed, it would seem as if some leading sources which had been active sellers in the previous two weeks, had pretty well cleaned out all that they cared to sell for the present, although in one instance on the part of the more prominent companies we noticed at a small advance (about $\frac{1}{2}$ c.) some further but moderate quantities put out for sale and buyers responded only at the late inside prices, or about $\frac{1}{4}$ c. above them.

The market, however, must be regarded as temporarily firmer, whatever contrary opinions prevail as to a later near market. It would seem even now that if there was re-

sumption of leading interests selling that the market would become easier. But there is no further disposition to unload; therefore buyers feel safe in bidding such prices as they do bid.

There is undoubtedly an impression that however steadier the market is and may be for a few days, that it is not likely to take on permanent strength until the May delivery is out of consideration, and that meanwhile if any pressure should come up to sell, the present improved tone would be lost.

The feeling against at present permanent strength is that as there is considerable oil to be delivered on May contracts, and that as there is poor prospect of a near increase in the demands from the compound makers for it, that there may be some further uneasiness over prices, slight perhaps, after a brief period of firmness. Unquestionably, however, the market has got into that position since the recent sharp decline in its prices, which latter had been something over five cents per gallon, near an export basis, but only with a few consumers on the continent who want at least small lots of edible oils. It does not strike us, however, that the prices are close enough for any very material export demand, considering the abundance of other oils in Europe, and the fact that they can be used for the soap kettle at a much less price than that of cotton oil. And, as well, in consideration of the fact that the pure lard market is down to a price that does not make especially effective competition with it in Europe with the compounds. It does not seem probable that Europe would buy very material quantities of the edible oils for a while unless the lard market does materially better than at present, and which is not probable. Nevertheless that Marseilles, Rotterdam and Trieste have taken small lots of the edible grades of the cotton oil this week, and that Rotterdam is within $\frac{1}{2}$ c. of our market for other light quantities of the edible oil, means that there is just that much awakened interest over buying the oil here from a long period of dulness. Nevertheless that it is not likely to prove of significance sufficient to offset some other possible influences, and which are comprised by the dull home consumption of the oil, because of the dragging pure lard market, the fear that more oil will be delivered on contracts than can be placed to consumers promptly, and the, perhaps, apprehended menace of holdings by the South and otherwise upon the New York market, however that there has been no pressure, as yet, to sell the holdings of the South, and that there may not be.

But that the traders, as a whole, look upon the possibilities of at some time in the near future of too much oil being offered for sale

than demands, from the present outlook, can take care of, until the compound maker's demands improve is implied from the indisposition to bid the market up materially from its late inside basis, even though it is clear that the offerings of the oil from the late leading sellers have become very light, and that the general amount of the oil on offer for future deliveries is now very moderate.

That the outside speculative demand, while it is strong enough to hold the market at a small fraction above the late made prices, yet it stops bidding at that point; this would seem to show that the feeling on the part of buyers is that as a considerable decline had taken place in the price of the refined oil that it might be good for a small temporary turn, and at the same time that considering the dull conditions of consumptive demands and the dull market outlook for all fats that it was exceptionally risky to have buoyant views over the near future oil market, whatever firmer market for it may develop later on in the season.

It must be said that there are more trade hopes of improved conditions for later than the intermediate deliveries, and that there are better expectations for the summer months, or after the May delivery is out of the way, than for the near deliveries, whatever firm temper is now exhibited. Hence is some switching of May to July contracts.

It must not be considered that the oil market has been, in the period of the recent declining tendency, thoroughly under manipulation, as many traders are apt to view a market condition after it has shown sudden sharp declines in prices. The explanation must, in part, be that for some time before the decline in the oil prices had taken place that the market for it had been held up more upon sentimental influences, with the well understood much more moderate production of the oil this year than in the previous year; the modified production was the keynote for the then supported prices. But for many weeks the demand for the oil from the compound makers had been light, while from the soapmakers there had been little inquiry; moreover, the export demand was at a standstill. Therefore, when it came to a desire to sell the oil, as in the late two or three weeks' trading in it, the market naturally went down to the point where speculators took hold of it. It was hardly likely that the refined oil would have been offered at the seaboard as freely as it was on the late lower tendency of the prices for it, if there had been any encouragement to hold it; the depressed condition of the compound and other manufactured goods business were working against the holding of the refined oil, and especially as it was clear that not much crude oil could be had to take its place with the sellers of the refined. Besides that it would be well understood that the South, as well situated financially as it is,

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would not, so far as concerns, at least, offerings by the large mills, be led to spill out holdings of the crude, notwithstanding any decline for refined, until the weather conditions became such that there would be necessary selling through apprehended loss of quality of the crude and the consequent depreciated value of it.

Of course it is only a few weeks more that the crude oil could be held with absolute security all around of quality, although a good portion of the crude in any event would meet requirements. There is undoubtedly the usual every season's disposition to get the crude oil upon as reasonable a basis as possible as against possible market conditions for the refined. Nevertheless we look upon the market for the refined oil as influenced chiefly by the dull conditions of consumptive demands, which have, for the present, at least, offset the factor of diminished productions, and especially when it is considered that there is much less export movement than even the modified volume of

it in the previous year and that the compound maker's consumption is much more moderate than then. It would require, in our opinion, a decidedly better lard market, and a sharp increase in the consumption of compound lard, with more of an export demand, for a decided effect upon the oil market, and by which the lighter production of the oil for the season could come up as a decided factor. At the same time it must now be considered, that because of the late decline in the prices of the oil that it is 5 to 6c. per gallon cheaper than it was at this time last year, and that it is standing in that degree at least, with the sentiment of a depressed lard market, as against that of the previous year. Nevertheless the cost of the cotton oil, even though oleo stearine is materially lower than in the previous year, makes it necessary to get a 6½c. price for the compound lard, and this price is too close to that of pure lard to expect a diversion of the demands in a liberal, general way from the pure lard to the compounds; therefore is

missed a certain degree of consumption of cotton oil.

Besides, no distributing source to consumers cares to stock up largely with either the compounds or pure lard, while the pure lard market continues unsettled; moreover, the packers are not likely to let the lard market go to a permanently stronger basis so long as the hog receipts are of fair volume. Although it must be said that with the present restricted demands for lard, the accumulating stocks of it, and the dull outside speculation in it, that it would be difficult to get a bulge at present in the lard market, notwithstanding the fact that lard ought to be higher on the relatively high cost of hogs, and the belief that the receipts of hogs will not be more than of ordinary volume for the next few weeks, however large they are at present from storm delayed supplies. Indeed, outside of the consideration that farmers will soon be busy for a while with their spring work, and will ship hogs forward more moderately it is

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doubtful if there are more than ordinary supplies of hogs in marketable condition in the country to come forward. The light weights of the hogs and the prompt marketing of them through the winter months because of the better prices made for corn in marketing than in feeding it point that out. The rush forward of hogs on Wednesday and Thursday was of delayed stock. But we think that the lard market will do better after the May option of it, as in cotton oil, is eliminated; therefore, that later markets for both fats are of a more hopeful order than those immediately or until the May delivery is out of the way.

That the traders, some of them, entertain some such opinion of cotton oil is shown in the further desire to transfer May contracts to July, and that July steadily holds one cent above the May delivery, with a switch on Wednesday of 500 bbls. May at 35½c. to 500 July at 36½c.

Notwithstanding the steadier cotton oil market at present, it is a fact that the compound makers are not attracted by the prices in it; there is a general holding off among them; this emphasizes either the point that the compound makers have no fear that the oil market will go against them, or that the condition of the compound lard business is of that dull, unsatisfactory order that there is a disposition among the compound makers to risk the future of the oil market. Indeed, a portion of the previous week's business in the oil was in the way of buying July and selling May, with more confidence of the holder in the later than the earlier option.

The tallow market, which has been holding steady at 4½c., and because it was around an export basis, and that it could be held only as the United Kingdom markets continued firm, because our home soapmakers are somewhat indifferent in buying the beef fat, is hardly changed; there has been, perhaps, a little better tone for the tallow at the West, where prime packers brings 5¼c., however dull the feeling in New York at 4½c. for city hhds. But the London sale for the tallow on Wednesday for the first time in weeks showed an easier tendency, with a decline of 3d. for the beef grade.

There is little question but that beef fats market would have better tone were it not for the position of the lard market, since cotton oil is too close the price of tallow to take much trading from it, while palm oil and coconut oil are too high to interfere with the consumption of tallow beyond special wants. But because of the position of the lard market the compound makers buy tallow sparingly, and especially as oleo-stearine is upon a reasonable trading basis for them; therefore, the soapmakers furnish most of the demands for the tallow, while there is loss of confidence in buying by the soapmakers because of the disturbed other fat markets. There are expectations of easier prices for tallow if the foreign markets continue to have their slack tone.

A feature of the cotton oil trading in New York this week and as due to the late excited business with the sharp drop in prices, together with the fact that the trading was

more general than usual, and as it came in from many speculators, was the call around for margins, and on the original margins, barring none of the traders, and which was a privilege that had not been indulged in a general way for many months, if not years. It was estimated that over \$100,000 went up in New York as margins on the recent speculation.

There is beginning a good deal of interest in the possibilities of the "Second crush"; it is quite certain that in some sections it will be lighter than ordinarily, but some of the trade have a belief that it will be a little larger, as covering other localities than usual, and notwithstanding the increased cotton acreage, as probable, and because they believe that there are sections where seed has been held back a little more freely than usual, and that it will be released when the planting season is over.

The Hull (Eng.) market has declined 1½d. this week, and is quoted at 19s. 6d.

The mills, those in the southeast especially, are unwilling sellers of crude under 29c.; some of them would not sell at that price; the large buyers of crude do not want to pay over 28c., as considering that price in line with the prices of refined at the seaboard and as carrying out the principle that the crude oil had ought to be had by relation with the prices of the refined. But as we have before implied the large mills will not sell under the present market conditions. There are demands for small lots of crude from other sources at 28½c.

There has not been much sold of the holdings of the South of the refined oil at the seaboard, and generally the South waits for developments, and which depend chiefly upon the issue of the lard market, as it may increase or keep quiet demands for the oil for the make of compounds.

Union Oil Co. prices continue at 40@42c. for salad, 40@42c. for winter white and 39@41c. for winter yellow.

(Continued on page 42.)

Lombard Iron Works & Supply Company AUGUSTA, GA.

Builders and Dealers in **ENGINES, BOILERS, Tanks, Stacks, Standpipes, etc.**; Bridge and Architectural Iron Work; Railroad, Cotton, Saw, Fertilizer, Oil and Ice **MACHINERY** and Supplies and Repairs; Shafting, Pulleys, Hangers, Leather and Rubber Belting and Hose; **MILL SUPPLIES and TOOLS**; Foundry, Machine, Boiler and Bridge Work. Capacity for 800 hands.

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CHICAGO SECTION



CHICAGO'S PACKING INDUSTRIES.

It might surprise some people to know just how many plants there are in packingtown and vicinity, besides Armour, Swift, Morris, Hammond and S. & S., connected with the packing and allied industries. Commencing at 47th and Center avenue and taking them in rotation the plants at the yards are as follows:

H. Boore & Co., packers of hogs.
Adler & Obendorf, grease, hides, etc.
G. H. Hammond & Co., packers of cattle, hogs and sheep.
German-American car shops.
Northwestern Fertilizer Co.
Henry J. Seiter (John Morrell & Co.).
Roberts & Oake, packers of hogs.
Boyd, Lunham & Co., packers of hogs.
North American Provision Co., cold storage.
T. J. Lipton Co. (now Armour & Co.).
Armour & Co., packers of cattle, hogs and sheep.
Nelson Morris & Co., packers of cattle, hogs and sheep.
Darling & Co., fertilizers, grease, etc.
Schwarzschild & Sulzberger Co., packers of cattle, hogs and sheep.
Hine Bros., fertilizers and grease.
Friedman Mfg. Co., butterine and neutral lard.
C. Turner & Co., fertilizers, grease, etc.
D. Levi, cattle, hogs and sheep.
Anglo-American Provision Co., packers of cattle, hogs and sheep.
Continental Packing Co., packers of hogs.
Swift & Company, packers of cattle, hogs and sheep.
Libby, McNeill & Libby, canners.
U. S. Yards & Transit Co., Exchange Building.
National Rendering Co., Exchange Building.
L. Pfaelzer & Sons, packers of cattle, hogs and sheep.
Hoff & Brennan, packers of hogs.
Wolf Slaughtering Co., cattle, hogs and sheep.

Standard Slaughtering Co., cattle, hogs and sheep.

National Provision Co., hogs.

Levi Bros., cattle, hogs and sheep.

Henry Guth, cattle, hogs and sheep.

In addition there are the following elsewhere in the city:

Nebraska City Packing Co., packers, of Nebraska City, Neb.

Agar Bros. Co., packers, of Des Moines, Ia.

Braun & Fitts, butterine.

David Berg & Co., canners, etc.

Cudahy Packing Co.

N. K. Fairbank Co., lard substitutes, etc.

W. J. Moxley, butterine.

Miller & Hart, packers.

The Nutriment Co., extracts, etc.

Omaha Packing Co., packers.

Arnold Bros., packers.

Ruprecht & Co., packers.

Oscar Mayer & Bro., packers.

Vestey Canning Co.

This makes a total of thirty-two concerns at the yards and forty-six in the city, not counting numerous other smaller concerns, besides sausage manufacturers, soap manufacturers, etc.

CHICAGO NOTES.

Board of Trade memberships are selling around \$3,700.

Cavanaugh is superintending the construction of the Kentucky Packing Company's new plant.

Fred. Higbie has not been seen around these past few weeks. The boys say he has gone to a warmer climate—for awhile.

B. F. Nell has had a little the best of some of the "sawed-offs" during the muddy spell. He only took about two strides to the block.

John W. Hall, manager of the Anglo-American's lard refinery, is doing Cuba. Re-

port sayeth John Morrell, of Ottumwa, is there also.

Nelson Morris & Co. are rushing their new Kansas City plant and are asking for prices right along on all kinds of machinery, pipe, fittings, supplies, etc.

David Lofts, expert mechanical engineer, is now an attache of Nelson Morris' purchasing department. The boys will have to keep getting up earlier and earlier.

A. S. Reid, who was with the old International Company so long, is now manager of Swift & Company's branch at No. 301 South College street, Charlotte, N. C.

Grant Cudney, Hammond & Company's calf buyer, may look just as well afoot as on horseback, but he looks a whole lot bigger on horseback. He is a great little fellow.

The Kentucky Packing Co. have about arrived at a point in building where they can commence the installation of machinery, of which they need a full complement.

Ed. Lewy has just returned from St. Louis and says Fred. J. Selbie, Nelson Morris & Co.'s purchasing agent, is just the same as ever, busy breaking figures and things.

Friends of James Reid, the old-time packinghouse man, will be pleased to know he is pleasantly spending his remaining years at Rose Place, Island Magee, Belfast, Ireland.

R. W. Young, manager of the Weir & Craig Manufacturing Company, was in New York last week, having spent a day or two in his old home town, Hamilton, Ontario, en route.

These days of strict fire insurance rules remember and write Walter H. Barry, Variety Mfg. Co., 77 West Lake street, Chicago, for particulars as to his fireproof arrangements.

COLD STORAGE

PRODUCE EXCHANGE, NEW YORK

A NEWS AND TECHNICAL MAGAZINE OF THE COLD STORAGE, REFRIGERATING,
ICE MAKING, NATURAL ICE, AND ALLIED TRADES

SAMPLE COPY ON REQUEST

ONE DOLLAR A YEAR

Mr. W. White, who was assistant manager and treasurer of the T. J. Lipton Co., will go to St. Joseph to manage Nelson Morris' plant there. Mr. White is a popular and capable man.

Hugo Arnold, of Arnold Bros., butchers and provision dealers, No. 145 West Randolph street, has just recovered from a serious illness. His friends are pleased to see him on deck again.

Roxy Williams, manager of Hammond Company's South Water street branch, is always open to buy tenderloins providing they are from white hogs. He thinks some of those tenderloin fellows originally came from the "Tenderloin" district.

N. G. Conybear, who was with the T. J. Lipton Co. as general manager, has joined the Arbuckle forces. Mr. C. has the reputation of being the speediest tea and coffee salesman ever. He sold so much tea in Denver seven years ago that they have not used it up yet.

W. R. Drucek, who has been with the Hammond Company many years, and is one of the foremost canners and extract makers in the country, is now superintendent of the St. Louis Dressed Beef and Provision Co., St. Louis, Mo., and is immensely satisfied with his associates, surroundings and the city.

William Lee Wyness, cattle buyer for Armour & Co., recently enjoyed quite a prolonged reunion with his old-time friend, Peter Dunn, the best known sheep man in Great Britain. Mr. Dunn has made big money exporting sheep, and on several occasions lost a few, too. Wyness is nothing if not enthusiastic about his friends.

Ben Hunniford, who has a big meat market at No. 2033 State street, will move soon, as his old premises will be torn down and a big new structure erected. He will not move far, however. The Hunnifords are well known in the meat business. John has charge of the Anglo-American Provision Company's wholesale fresh pork and sundries branch.

The great Hermann, superintendent of the Anglo-American sausage department, says when he started there first he had about half a dozen sausage makers and very little machinery. That was less than fifteen years ago. Now he has 350 men and 150 girls making and pulling tight on the sausages. It is the biggest sausage foundry in the yards.

J. C. Irwin, of Irwin Bros. Co., No. 334 South Clark street, who do an immense hotel and restaurant business, not long ago took Seiter away from a "con" man whom he met in front of Irwin's store, and who wanted to show Henry the Illinois Central railroad wreck. Irwin is not quite so sure yet whether it would not have been better all round to have allowed the "con" to take Seiter along. It would have been hard on the bunco man, however.

Report has it that Charles F. Martin, secretary of the National Live Stock Association, has announced that the association has secured an option on the Jacob Dold Packing Company's plant at Kansas City, and that as soon as an expert examination of the premises has been made formal acceptance will follow. Why doesn't Mr. Martin charter a special train and bring a bunch of his associates to Chicago and look over Seiter's plant?

Officials of the Chicago Livestock Exchange attach but little importance to the decision of the Interstate Commerce Commission on the Chicago terminal charge. T. W. Tomlinson, who is handling the case for the Exchange, said: "It means that we are at liberty to go ahead and present evidence that the roads have not reduced charges since the \$2 terminal charge was imposed. Eventually we will win, but this decision has no marked significance. It gives the interested railroads, however, the right to show reasons for increasing rates and practically reopen the whole matter."

One can hear at any time all kinds of mean stories about the heads of the various packing concerns—to be head of such is nearly as bad as running for political office—but now and again it leaks out that they do good, unselfish deeds, and try to keep them secret. In one instance two of our leading packers called in person on a poor packingtown clerk—he was not in the employ of either—and summoned expert help for his wife, which cost them several hundred dollars, and in addition left substantial checks to defray other expenses. Do they have to do this, ye howling anarchists?

MOLASCUIT AS A FODDER.

Two steers were recently exhibited in Buenos Ayres fed on molascuit, a new fodder in that country made from crushed sugarcane and molasses. It is reported that this food simply transformed the animals in the short space of ten days. One London, England, firm sold 60,000 tons of this food last year. It is said to be very inexpensive.

A DREAM OF THE PAST.

A salesman dreamt that Charley Bonner Passed in his checks and was a goner; That when "his nibs" went up on high, To that "bourne from whence" beyond the sky, The first thing when he landed there (He made the trip on a cut-rate fare), He jumped St. Peter for a figure On a front seat not any bigger Than was absolutely necessary, Which put St. Pete in a quandary. For in his long administration He'd tackled men of every nation, And men of every which old station, And each and every vocation, Who'd left the earth, aspiring higher, But never a Chicago buyer— For so the piece of cardboard read Which Bonner had "franked" on ahead.

Well, Peter thunk and thunk and thunk And thunk: "This guy 'll make a monk Of me as sure as—hem!—perdition, I have got no competition. Why, what the hen is eating me?" Which ended Pete's soliloquy. Much solaced by this lucky think, He said to Charley without a blink: "The seat will cost you ninety bucks; its party steep, I know, but shucks, When you land here beyond the sky You must expect things to come high. And, by the way, there is no discount, So, Sonny, come right in and mount Your little throne, and don't renaig. The way you did with Weir & Craig, And Ferrin, too, and Allbright-Nell, Or I may send you down to—Well, I guess you know your little book And realize that you are stuck, The first inshoot out of the box Upon your landing here, old sox.

So Charley took his little seat, And looked as if he owned up beat; He rubbered 'round, then heaved a sigh, And muttered, "This is too darned high; I don't see any reason why List price should go up here in heaven, With Chicago sixty, ten and seven; If I could only grab a 'phone I'd bet St. Peter just one bone I'd beat him out at his own game. Well, never mind; but, all the same, Before I pay I'll make him take Off fifty, or jump in the lake. I've met all kinds before; but, dimmit, I think St. Peter is the limit!" He'd been so dog-goned used to wipe Up the earth when buying pipe, With Davis, Crane and Glaw & Son, He could not see—the son-of-a-gun— Just where there was a little fun For him in Pete's determined stand. And have no chance to take a hand In busting Pete's monopoly And start him climbing up a tree, Or force him to pack up his goods. And make a bee line for the woods.

The salesman woke and looked around, And there sat Bonner, safe and sound, The 'phone held in his good right hand, And shooting "con" to beat the band. The biggest bunch of first class "bunk," And all in one gigantic bunk. The salesman thought a second or so That Bonner was "it," but then again, No, That this side of the torrid zone The King of "bunks" was Charles Sloan.

His Joblots tiptoed to the door, Made his escape, and fairly tore Up the street with a wild desire To get as far as the "L" fire. He possibly could in the shortest space Of time and leave not the faintest trace, For fear that terrible Turkey should— And he had no doubt he really would— Demand a habeas corpus writ For his whole carcass, bit for bit, And a mittimus for his house as well, If he or they attempted to sell Him anything except at under cost, And see also that the bill got lost.

If ever they find that salesman more Its a dollar to nothing that over the door Will be a letter and number as well, And people passing the padded sell Will sorrowfully say he tried to sell His goods at a profit in Packing town To the hardest buyer that ever came down The pike; and there's scarce a seller makes the trip Whose hair has not begun to slip. If not, he'll need but another hearing Before he can drive 'em up in the clearing.

PROVISION LETTER.

(Special Letter to The National Provisioner from C. D. Forsyth & Co.)

Chicago, March 30, 1904.

We quote to-day's market as follows: Green hams, 10@12 ave., nominally 9½@9½; 12@14 ave., nominally 9@9¼; 14@16 ave., nominally, 9½; 18@20 ave., nominally 9½; green picnics, 5@6 ave., nominally 6½; 6@8 ave., nominally, 6½; 8@10 ave., nominally, 6½; 10@12 ave., nominally, 6½; green New York shoulders, 10@12 ave., nominally 6½; 12@14 ave., nominally 6½; green skinned hams, 18@20 ave., nominally, 10¼@10½; green clear

THE DAVIES WAREHOUSE & SUPPLY CO.

Office: 20 N. Clark St.
on C. & N. W. R. R. } CHICAGO
Warehouse: 161 N. Water St.

Tools, Scoops & Shovels.

Manufacturers and
Dealers in all kinds of
Packing House Supplies.

ALL IRON TANK
COCKS, D & D Pattern
x x x
HAM and LIVER
NEEDLES
x x x

BRASS and IRON
GOODS.

bellies, 8@10 ave., nominally 9½; 10@12 ave., nominally 9½; No. 1 S. P. hams, 8@10 ave., nominally 9½; 10@12 ave., nominally 9½; 12@14 ave., nominally 9½; 14@16 ave., nominally 9; 16@18 ave., nominally 9½; 18@20 ave., nominally 9½; No. 2 S. P. hams, 10@12 ave., nominally 9½; 12@14 ave., nominally 8¾; 14@16 ave., nominally 8¾; No. 1 S. P. skinned hams, 16@18 ave., nominally 10; 18@20 ave., nominally 10; 20@22 ave., nominally 10; 22@24 ave., nominally 9½; 24@26 ave., nominally 9½; 26@30 ave., nominally 9½; No. 1 S. P. picnics, 5@6 ave., nominally 6½; 6@8 ave., nominally 6½; 7@9 ave., nominally 6½; 8@10 ave., nominally 6½; 10@12 ave., nominally 6½; No. 1 S. P. New York shoulders, 8@10 ave., nominally 6½; 10@12 ave., 6½; S. P. clear bellies, 8@10 ave., nominally 9½; 10@12 ave., nominally 9; family back pork, 30@40 piece, \$14.00; do. 40@50 piece, \$14.25; do. 50@60 piece, \$14.50; Boston butt pork, \$12.50; ham butt pork, \$12.25; bean pork, \$10.00.

CHICAGO LIVE STOCK.

STOCK YARD RECEIPTS AND SHIPMENTS.

Receipts.	Cattle.	Calves.	Hogs.	Sheep.
Monday, March 21.....	26,469	305	38,536	23,520
Tuesday, March 22.....	3,126	2,412	7,914	13,009
Wednesday, March 23.....	16,576	1,085	19,943	18,273
Thursday, March 24.....	7,556	1,575	13,768	19,972
Friday, March 25.....	2,092	202	14,686	5,968
Saturday, March 26.....	258	22	8,721	1,183
Total.....	56,067	5,691	103,568	82,225
Previous week.....	57,977	4,045	147,496	86,510
Year ago.....	63,382	4,089	119,577	61,448
Two years ago.....	60,610	7,420	183,279	65,652
Shipments:				
Monday, March 21.....	6,950	24	13,900	6,618
Tuesday, March 22.....	3,194	...	6,414	4,459
Wednesday, March 23.....	5,122	20	7,139	5,903
Thursday, March 24.....	5,738	27	8,881	5,377
Friday, March 25.....	2,274	50	5,574	1,377
Saturday, March 26.....	599	...	6,248	217
Total.....	23,877	121	46,216	22,151
Previous week.....	26,635	206	61,087	26,919
Year ago.....	22,747	140	30,010	6,596
Two years ago.....	16,881	971	39,915	11,734

Estimated receipts for week ending April 2: 60,000 cattle, 140,000 hogs, and 80,000 sheep.
Combined hog receipts at eleven markets week ending March 26, 318,000; previous week, 383,000; year ago, 356,000; two years ago, 422,000. Total for year to date, 6,178,000; year ago, 5,221,000.

Receipts at six western markets week ending March 26:	Cattle	Hogs	Sheep
Cattle.....	135,200		
Hogs.....	231,900		
Sheep.....	169,600		
Week ago:			
Cattle.....	145,700		
Hogs.....	308,700		
Sheep.....	180,400		
Year ago:			
Cattle.....	138,900		
Hogs.....	272,700		
Sheep.....	121,700		

Average price of good beef cattle:

Week ending March 26.....	\$4.65
Previous week.....	4.60
Year ago.....	4.65
Two years ago.....	6.15
Three years ago.....	5.00

Top prices for cattle:

Week ending March 26.....	\$5.80
Previous week.....	5.80
Year ago.....	5.50
Two years ago.....	7.40
Three years ago.....	6.00

Average price of hogs:

Week ending March 26.....	\$5.32
Previous week.....	5.36
Year ago.....	7.47
Two years ago.....	6.59

Prices on all kinds of stock firm, with a decided upward tendency for good killing material and feeders.

CATTLE.

Choice to fancy beefs.....	\$5.55@5.75
Good to choice heavy steers.....	5.10@5.50
Fair to good export and shipping steers.....	4.80@5.00
Medium beef steers.....	4.10@4.60
Inferior and plain steers.....	3.50@4.10
Good to fancy cows and heifers.....	4.00@4.65
Good to choice feeders.....	3.70@4.50
Poor to fair stockers and feeders.....	2.50@3.00
Fair to good cows and heifers.....	3.20@3.75
Good cutting and fair beef cows.....	2.70@3.15
Common to good canning cows.....	1.75@2.75
Bulls, poor to choice.....	1.75@4.00
Calves, good to fancy.....	5.25@6.25
Calves, common to fair.....	2.75@5.00
Corn-fed western steers.....	4.10@5.40
Texas bulls and thin steers.....	2.25@3.70
Fed Texas steers, fair to choice.....	3.30@4.50

HOGS.

Good to choice heavy shipping.....	\$5.60@5.65
Fair to good butcher weights.....	5.50@5.62
Fair to good heavy packing.....	5.40@5.55
Rough to choice heavy mixed.....	5.35@5.55
Assorted light, 150 to 180 lbs.....	5.40@5.50
Good to choice light mixed.....	5.40@5.60
Inferior light mixed.....	5.20@5.35
Poor to choice 60 to 135 lb. pigs.....	4.40@5.15

SHEEP.

Fair to prime wethers.....	\$5.10@5.75
Fair to good mixed lots.....	4.50@5.10
Fair to prime western wethers.....	5.00@5.40
Fair to prime yearlings.....	4.85@5.50
Ewes, fair to fancy.....	4.25@5.25
Plain to good feeding stock.....	3.70@4.00
Culls and tail-end stock.....	2.50@3.60
Native lambs, poor to fair.....	3.75@5.30
Native lambs, good to fancy.....	5.30@6.10
Fat western and Mexican lambs.....	5.40@6.15
Western feeding lambs, poor to choice.....	4.50@5.25
Shorn lambs.....	4.25@5.20

CHICAGO PROVISION MARKET

RANGE OF PRICES.

SATURDAY, MARCH 26, 1904.

	Open.	High.	Low.	Close.
LARD—(Per 100 lbs.)—				
May.....	7.02	7.02	7.02	7.02
July.....	7.17	7.17	7.15	7.17
RIBS—(Boxed 25c. more than loose)—				
May.....	6.92	6.92	6.92	6.92
July.....	7.07	7.07	7.05	7.07
PORK—(Per barrel)—				
May.....	13.20	13.20	13.12	13.15
July.....	13.40	13.40	13.32	13.37

Cyclone

REGISTERED TRADE MARK

Disintegrators and Pulverizers

Are Used by the Largest Manufacturers in the World in Many Industries.

Give a Much Larger Output per H. P. than any other Mills.

PATENTED AIR SEPARATION when desired

E. H. STROUD & CO.

MANUFACTURERS FOR

United States, Canada, and Mexico.

30 to 36 La Salle Street,
CHICAGO, U. S. A.

AGENCIES: New York, Toronto, Mexico City. ON SALE: London, Paris, Vienna.

MONDAY, MARCH 28, 1904.

LARD—(Per 100 lbs.)—				
May.....	7.00	7.07	7.00	7.05
July.....	7.17	7.25	7.17	7.22
RIBS—(Boxed 25c. more than loose)—				
May.....	6.92	7.00	6.92	6.97
July.....	7.05	7.15	7.05	7.12
PORK—(Per barrel)—				
May.....	13.15	13.40	13.15	13.32
July.....	13.40	13.60	13.35	13.55

TUESDAY, MARCH 29, 1904.

LARD—(Per 100 lbs.)—				
May.....	7.05	7.12	6.97	6.97
July.....	7.22	7.27	7.12	7.12
RIBS—(Boxed 25c. more than loose)—				
May.....	7.00	7.02	6.90	6.90
July.....	7.17	7.20	7.05	7.05
PORK—(Per barrel)—				
May.....	13.35	13.47	13.07	13.07
July.....	13.55	13.70	13.25	13.25

WEDNESDAY, MARCH 30, 1904.

LARD—(Per 100 lbs.)—				
May.....	6.92	6.95	6.92	6.92
July.....	7.07	7.12	7.07	7.10
RIBS—(Boxed 25c. more than loose)—				
May.....	6.82	6.85	6.80	6.82
July.....	7.00	7.02	6.95	7.00
PORK—(Per barrel)—				
May.....	12.95	13.00	12.90	13.00
July.....	13.07	13.22	13.07	13.22

THURSDAY, MARCH 31, 1904.

LARD—(Per 100 lbs.)—				
May.....	6.90	7.00	6.90	6.97
July.....	7.02	7.15	7.02	7.10
RIBS—(Boxed 25c. more than loose)—				
May.....	6.77	6.90	6.77	6.90
July.....	6.95	7.07	6.95	7.07
PORK—(Per barrel)—				
May.....	12.85	13.15	12.85	13.15
July.....	13.10	13.37	13.05	13.35

CHICAGO HOG SLAUGHTER.

Chicago packers slaughtered hogs during the week ending March 26 as follows:

Armour & Co.....	18,300
Anglo-American.....	6,900
Continental.....	1,900
Swift & Company.....	13,600
Hammond.....	2,200
Morris & Co.....	6,200
Boyd, Lunham Co.....	1,200
S. & S.....	4,100
Roberts and Onke.....	1,200
Other packers and city butchers.....	13,200

Total.....	68,800
Week previous.....	95,400
Year ago.....	97,500
Two years ago.....	157,700
Three years ago.....	118,000

Specify
LUNKENHEIMER
Safety Water Columns
"Positively reliable under all conditions"

We carry in stock a full line of.....



BELT and
ELECTRIC FANS
and also
WATER MOTORS

For Running Belt Fans.

For Descriptive Catalogue and Prices send to

HUNTER FAN & MOTOR CO., Fulton, N. Y.

MARKET PRICES.

CHICAGO. WHOLESALE FRESH MEATS.

Beef.

Western Cows.....	5 1/2 @ 6
Native Cows.....	6 1/2 @ 7
Western Steers.....	6 1/2 @ 7
Good Native Steers.....	7 1/2 @ 8
Heifers.....	6 1/2 @ 7

Beef Cuts.

Medium Hinds.....	6 1/2 @ 7
Good Hinds.....	9 @ 9 1/2
Choice Hinds.....	10 @ 10
Medium Fores.....	4 1/2 @ 5
Good Fores.....	5 1/2 @ 6
Choice Fores.....	6 @ 6 1/2
Chucks Good.....	5 1/2 @ 6
Plates Medium.....	5 1/2 @ 6
Plates Good.....	4 @ 5
Cow Rounds.....	5 1/2 @ 6
Rounds Good.....	6 1/2 @ 7
Rounds Choice.....	7 @ 7 1/2
Loins Medium.....	8 @ 8 1/2
Loins Good.....	9 1/2 @ 10
No. 1 Loins.....	14 @ 15
Tenderloins.....	16 @ 17
No. 2 Tenderloins.....	12 1/2 @ 13
Strip Loins.....	7 @ 7 1/2
Sirloin Butts.....	9 @ 9 1/2
Shoulder Cuts.....	6 1/2 @ 7
Rolls.....	10 @ 11
Rump Butts.....	5 1/2 @ 6
Boneless Chucks.....	5 1/2 @ 6
Trimnings.....	4 1/2 @ 5
Shank.....	4 @ 5

Beef Offal.

Livers.....	3 1/2
Hearts.....	3
Tongues.....	11 1/2
Sweetbreads.....	20
Ox Tails.....	4

Veal.

Heavy Carcass Veal.....	6 @ 7
Light Carcass.....	8 @ 9
Medium Carcass.....	8 @ 9
Good Carcass.....	9 1/2 @ 10
Medium Saddles.....	11
Good Saddles.....	11 1/2 @ 12
Medium Racks.....	6 @ 7
Good Racks.....	7 @ 7 1/2

Veal Offal.

Brains.....	4
Sweetbreads.....	10
Hearts.....	8
Livers.....	35
Plucks.....	

Lambs.

Medium Caul.....	7 @ 8
Good Caul.....	7 1/2 @ 8
Springfield Lambs.....	9 @ 9
Round Dressed Lambs.....	9 1/2 @ 10
Saddles Caul.....	9 @ 9
Saddles Springfield.....	11
R. D. Lamb Saddles.....	7 1/2 @ 8
Caul Lamb Racks.....	6 @ 7
Springfield Lamb Racks.....	6 1/2 @ 7
R. D.....	7 1/2 @ 8

Mutton.

Medium Sheep.....	6 @ 6 1/2
Good Sheep.....	6 1/2 @ 7
Medium Saddles.....	8 @ 8 1/2
Good Saddles.....	9 @ 9 1/2
Medium Racks.....	4 1/2 @ 5
Good Racks.....	5 @ 5 1/2
Mutton Legs.....	8
Mutton Stew.....	4

Fresh Pork, Etc.

Pork Loins.....	9 @ 10
Leaf Lard.....	18 @ 19
Tenderloins.....	7 @ 7 1/2
Spare Ribs.....	7 1/2 @ 8
Butts.....	7 1/2 @ 8
Hocks.....	5 @ 5 1/2
Trimnings.....	6 @ 6 1/2
Tails.....	3 1/2 @ 4
Snouts.....	3 @ 3 1/2
Pigs Feet.....	2 1/2 @ 3
Pigs Heads.....	2 1/2 @ 3
Knuckles.....	2 1/2 @ 3
Blade Bones.....	5 @ 5 1/2
Cheek Meat.....	3 1/2 @ 4
Hog Plucks.....	3 @ 3 1/2
Neck Bones.....	1 1/2 @ 2
Skinned Shoulders.....	7 @ 7 1/2
Boiled Hams.....	14 1/2 @ 15
Smoked Boiled Hams.....	13 1/2 @ 14
Boiled Onions.....	9 @ 10
Loins Rolls.....	17 @ 17 1/2
Slip Bones.....	3 1/2 @ 4
Tail.....	2 1/2 @ 3
Back.....	1 1/2 @ 2

Dry Sausage.

Packed in 25-lb. boxes, 1/4c. per lb. extra.

Extra Fine Cervelat.....	18 1/2
Choice H. C. ".....	16
Fine H. C. ".....	15
Special H. C. ".....	10 1/2
Special B. C. ".....	10 1/2
Western B. C. ".....	11 1/2
Goteborg.....	11 1/2

Milanese Salami in Hog Casings.....	19 1/2
Choice H. C. Milano Salami.....	18 1/2
Choice B. C. German.....	15 1/2
Fine B. C. ".....	14 1/2
Special B. C. ".....	13 1/2
Excelsior B. C. ".....	11 1/2
Choice H. C. Arles.....	18 1/2
Choice B. C. ".....	16 1/2
Fine B. C. ".....	15 1/2
Choice Arles Frisces.....	17 1/2
Mortadella.....	17 1/2
Landjaeger.....	17 1/2
Holsteiner.....	10 1/2
Farmer.....	11 1/2
Coppa.....	17 1/2
Lyons.....	37

Fresh Sausage, Etc.

Breakfast Sausage, 1-lb. cartons.....	13
Pork Link, large No. 1.....	6 1/2
Pigmy Sausage.....	7
Sausage Meat No. 1.....	6 1/2
Pork Link, large No. 2.....	6
Sausage Meat, No. 2.....	6
Frankfurts.....	6
Special Frankfurts.....	7
Vienna Frankfurts, 10-lb. cartons.....	7 1/2
Polish.....	6
Knobloch, or Garlic Sausage.....	6
Head Cheese.....	4 1/2
Blood Sausage.....	4 1/2
Liver Sausage.....	4 1/2
Leona.....	6
Bologna in Weasands.....	6
Bologna in Cloth Bags (paraffined).....	6
Ham Bologna in Paraffine.....	6 1/2
Bologna, long, round or large.....	5
Veal Ham.....	5 1/2
Minced Ham in Bladders (cooked).....	2 1/2
Berlin Ham (cooked).....	7
Prepared Ham in Cloth Sacks (cooked).....	9
New Eng. and Ham in Cloth (cooked).....	9
Boneless Ham.....	10
Tongue, white.....	8 1/2
Tongue, blood.....	7 1/2
Boneless Pigs Feet.....	5 1/2
Lauchon Beef.....	5 1/2
Fresh Pigs Feet.....	3
Smoked Loin Roll.....	17 1/2
Regular Boiled Hams.....	15 1/2
Smoked Boiled Hams.....	16
Boiled Picnics.....	10 1/2

	Bris.	Half	Qtr.	Kits
Spiced Pigs Feet.....	7.50	3.20	1.70	.75
Pickled Plain Tripe.....	3.50	1.70	.90	.45
Pickled H. C. Tripe.....	6.00	2.65	1.50	.70
Fr. H. C. Tripe.....	9.00	4.25	2.25	.95
Pickled Ox Lips.....	11.50	4.75	2.50	1.05
Pickled Pigs snouts.....	11.50	4.75	2.50	1.05

Wholesale Smoked Meats.

Hams, 12 lbs. average.....	12 1/2
" 14 ".....	11 1/2
" 16 ".....	11
Skinned Hams.....	12 1/2
Cauls, 6 1/2 lbs. average.....	7 1/2 @ 8 1/2
" 8 1/2 ".....	7 1/2 @ 8
Breakfast Bacon, fancy.....	15 1/2 @ 6
Wine, 8 1/2 lbs. average, and strip, 4 1/2 average.....	10 1/2
" 10 1/2 ".....	10 1/2
" 12 1/4 ".....	6 7/8 " 10 1/2
Dried Beef Sets.....	12 1/2
" Insides.....	13 1/2
" Knuckles.....	13 1/2
" Outsides.....	11 1/2
Regular Boiled Hams.....	15 1/2
Smoked.....	10 1/2
Boiled Picnic Hams.....	10 1/2
Cooked Loin Rolls.....	17 1/2

BARRELED BEEF AND PORK.

	Per bbl.
Extra Plate Beef.....	10.50
Plate Beef.....	10.00
Extra Mess Beef.....	10.00
Prime Mess Beef.....	10.50
Beef Hams.....	18.50
Rump Butts.....	10.00
Mess Pork (repacked).....	13.25 @ 14.00
Clear Fat Backs.....	13.50 @ 14.00
Family Back Pork.....	16.00
Bean Pork.....	11.75

Dry Salt Meats.

Clear Bellies, 14/16 average.....	8 1/2
Rib Bellies.....	8 1/2
Fat Backs.....	6 1/2
Regular Plates.....	6 1/2
Short Clears.....	5 1/2

CORNED, BOILED AND ROAST BEEF.

	Per doz.
1 lb. 2 doz. to case.....	\$1.30
2 lb. 1 or 2 doz. to case.....	2.40
1 lb. 1 doz. to case.....	4.85
6 lb. 1 doz. to case.....	8.00
2 lb. 4 doz. to case.....	18.00

EXTRACT OF BEEF.

	Per doz.
1 oz. jars 1 dozen in box.....	\$2.25
2 oz. jars 1 dozen in box.....	3.55
4 oz. jars 1 dozen in box.....	6.50
8 oz. jars 1/2 dozen in box.....	11.00
8 oz. jars 1/4 dozen in box.....	22.00
2, 5 and 10 lb. tins.....	\$1.75 per lb.

LARD.

Pure leaf, kettle rendered, per lb., tes.....	8 1/2
Lard substitute, tes.....	7 1/2
Lard compound.....	6 1/2
Barrels.....	1/4c. over tes.
Half barrels.....	1/4c. over tes.
Tubs, from 10 to 80 lb.....	1/4c. to 1c. over tes.
Cooking Oil, per gal.....	.45c

BUTTERINE.

F. O. B. CHICAGO.

No. 1, natural color.....	@ 10
No. 2.....	@ 11 1/2
No. 3.....	@ 12
No. 4.....	@ 13
No. 5.....	@ 14
No. 6.....	@ 15

SAUSAGE CASINGS.

Beef round, set of 100 ft.....	12 1/2 @ 14
Beef middies, set of 57 ft.....	8 1/2 @ 37 1/2
Beef bungs, each.....	24 @ 25 1/2
Hog casings, per lb salt.....	24 @ 25
Hog bungs, exports.....	5 @ 5 1/2
" medium, each.....	
" small, each.....	
Sheep casings, per bundle.....	.60 @ .65
" Imported, medium to wide.....	.65 .95

FERTILIZERS.

Dried blood, per unit.....	@ 2.35
Hoof meal, per unit.....	@ 2.05
Concent. tank, 15 to 16% per unit.....	@ 2.15
Ground tank, 10 to 11% per unit.....	2.15 @ 10c.
Unground tank, 10 to 11% per unit.....	2.05 @ 10c.
Unground tank, 9 and 30% ton.....	21.00
Unground tank, 6 and 35% ton.....	14.50
Ground raw bone, per ton.....	21.50
Ground steam bone, per ton.....	18.00

HORNS, HOOFS AND BONES.

Horns, No. 1, 65 to 70 lb, avg. ton.....	\$275.00
Horns, black, per ton.....	23.00
Horns, striped, per ton.....	30.00
Horns, white, per ton.....	45.00
Round Shin Bones, 38 to 40 lb, avg. ton.....	40.00
Round Shin Bones, 50 to 52 lb, avg. ton.....	40.00
Long Thigh Bones, 90 to 95 lb, avg. ton.....	93.00

LARDS.

Choice prime steam.....	@ 6.80
Prime steam.....	7
Neutral.....	@ 8 1/2
Compound.....	@ 6 1/2 @ 6 3/4

STEARINES.

Oleo.....	6 1/2 @ 7 1/2
Lard.....	7 1/2 @ 7 3/4
Grease, W.....	6 1/2 @ 6 3/4
Grease, B.....	5 1/2 @ 5 3/4
Grease, Y.....	4 1/2 @ 4 3/4

OILS.

Lard Oil, extra winter strained tes.....	.62
Lard Oil, extra, No. 1.....	.40
Lard Oil, No. 1.....	.38
Lard Oil, No. 2.....	.36
Oleo Oil, extra.....	.75 @ .77 1/2
Oleo Oil, No. 2.....	.71 @ .73 1/2
Neatsfoot Oil, pure.....	.60 @ .70
Neatsfoot Oil, No. 1.....	.63 @ .65

TALLOW.

Packers' prime.....	5 1/2 @ 5 3/4
No. 2.....	4 @ 4 1/2
Edible.....	5 1/2 @ 5 3/4
City renderers.....	4 1/2 @ 5

GREASE.

Brown.....	3 1/2 @ 3 3/4
Yellow.....	@ 4 1/2
White, A.....	@ 5 1/2
Bone.....	@ 5

CURING MATERIALS.

Refined saltpetre.....	4 1/2 @ 5 1/2
Boric acid, crystal to powdered.....	10 1/2 @ 11 1/2
Borax.....	7 1/2 @ 8
Sugar—	
Pure, open kettle.....	3 1/2
White, clarified.....	4 1/2
Plantation, granulated.....	4 1/2
Yellow, clarified.....	4 1/2
Salt—	
Ashion, in bags, 224 lb.....	\$2.35
Eng. packing, in bags, 224 lb.....	1.45
Michigan, medium, car lots, per ton.....	3.00
Michigan, granulated, car lots, per ton.....	2.50
Casing salt, bbls., 280 lb., 2X and 3X.....	1.00

COOPERAGE.

Tierces.....	@ 1.65
Barrels, Oak.....	@ 1.35
Ash.....	@ 1.15

NEW YORK CITY

QUOTATIONS FOR BEEVES.

Good to choice native steers.....	\$5.20 @ \$5.50
Medium to fair native steers.....	4.35 @ 5.10
Poor to ordinary native steers.....	3.75 @ 4.25
Oxen and stags.....	2.75 @ 5.00
Bulls and dry cows.....	1.40 @ 4.25
Good to choice native steers one year ago.....	5.25 @ 5.50

LIVE CALVES.

Live veal calves, a few selected.....	100 lb 7 3/4 @ 8 1/4
Live veal calves, good to prime.....	100 lb 7 @ 8

LIVE HOGS.

Hogs, heavy weights (per 100 lbs.).....	6.10 @ 6.90
Hogs, medium.....	6.30 @ 6.40
Hogs, light to medium.....	6.30 @ 6.45
Pigs.....	6.40 @ 6.50
Roughs.....	5.10 @ 5.50

LIVE SHEEP AND LAMBS.

Spring lambs, selected.....	per lb 6 1/4
Spring lambs, good to choice.....	per lb 6 1/4
Spring lambs, culls.....	6
Sheep, selected.....	per 100 lb 5 1/4
Sheep, medium to good.....	per 100 lb 5
Sheep, culls.....	per 100 lb 4

DRESSED BEEF.

CITY DRESSED.

Choice native, heavy.....	8 1/4 @ 8 3/4
Choice native, light.....	7 3/4 @ 8 1/4
Common to fair, native.....	6 3/4 @ 7 3/4

WESTERN DRESSED BEEF.

Choice native, heavy.....	7 3/4 @ 7 1/4
Choice native, light.....	7 1/4 @ 7 3/4
Native, com. to fair.....	6 3/4 @ 6 1/4
Choice Western, heavy.....	6 1/4 @ 6 3/4
Choice Western, light.....	6 @ 6 1/4
Common to fair, Texan.....	5 @ 5 1/4
Good to choice heifers.....	6 1/4 @ 6 3/4
Common to fair heifers.....	5 1/4 @ 6
Choice cows.....	6 @ 6 1/4
Common to fair cows.....	4 1/4 @ 5 1/4
Good to choice oxen and stags.....	5 @ 5 1/4
Common to fair oxen and stags.....	5 @ 5 1/4
Fleshy Bologna bulls.....	5 @ 5 1/4
Fresh pork loins, Western.....	11 @ 12

DRESSED CALVES.

Veals, city dressed, prime, per lb.....	8 @ 14
Veals, good to choice, per lb.....	7 1/4 @ 12 1/4
Calves, country dressed, prime, per lb.....	9 @ 10
Calves, country dressed, fair to good.....	7 @ 9
Calves, country dressed, common.....	6 1/2

DRESSED HOGS.

Pigs.....	8 1/4 @ 8 3/4
Hogs, heavy.....	7 1/4 @ 7 3/4
Hogs, 180 lb.....	7 1/4 @ 7 3/4
Hogs, 160 lb.....	7 1/4 @ 7 3/4
Hogs, 140 lb.....	7 1/4 @ 7 3/4

DRESSED SHEEP AND LAMBS.

Spring Lambs, choice.....	per lb 10
Spring Lambs, good.....	9 1/4
Spring Lambs, culls.....	9
Sheep, choice.....	7 1/4
Sheep, medium to good.....	7
Sheep, culls.....	6

PROVISIONS.

(Jobbing Trade)

Smoked hams, 10 lb average.....	12
Smoked hams, 12 to 14 lb average.....	11 1/4
Smoked hams, Heavy.....	11 1/4
California hams, smoked, light.....	8
California hams, smoked, heavy.....	8
Smoked bacon, boneless.....	11 1/4
Smoked bacon (rib in).....	11
Dried beef sets.....	13
Smoked beef tongues, per lb.....	14
Smoked shoulders.....	7 1/4
Pinked bellies, heavy.....	7 3/4

BONES, HOOF, HAIR AND HORNS.

Round shin bones, av. 50-60 lb cut, per 100 bones, per 2,000 lb.....	\$55.00
Flat shin bones, av. 40-45 lb cut, per 100 bones, per 2,000 lb.....	40.00
Thigh bones, av. 50-65 lb cut, per 100 bones, per 2,000 lb.....	75.00
Hoofs.....	15.00
Horns, 7 1/2 oz. and over, steers, first quality.....	770 @ 280

BUTCHERS' SUNDRIES.

Fresh steer tongues.....	50c to 75c a piece
Fresh Cow Tongues.....	35c to 60c a piece
Calves' head, scalded.....	3 1/2 to 4 1/2 a piece
Sweet breads, veal.....	25c to 75c a pair
Sweet breads, beef.....	16c to 18c a lb
Calves' liver.....	25c to 50c a piece
Beef kidneys.....	7c to 12c a piece
Mutton kidneys.....	14c to 24c a piece
Livers, beef.....	4c to 5c a lb
Ortals.....	5c to 7c a piece
Hearts, beef.....	10c to 15c a piece
Rolls, beef.....	10c to 12c a lb
Tenderloin beef, Western.....	15c to 25c a lb
Lambs' frons.....	6c to 10c a pair
Fresh pork loins, city.....	11 1/4 @ 12
Fresh pork loins, Western.....	10 @ 11

BUTCHERS' FAT.

Ordinary shop fat.....	2 1/4
Suet, fresh and heavy.....	4
Shop bones, per cwt.....	25

PICKLED SHEEPSKINS.

XXX sheep, per dozen.....	\$5.75
XX sheep, per dozen.....	4.50
X sheep, per dozen.....	3.75
Blind Rib sheep.....	3.75
Sheep, ribby.....	3.12 1/2
XX lambs, per dozen.....	4.50
X lambs, per dozen.....	3.50
No. 1 lambs, per dozen.....	3.00
No. 2 lambs, per dozen.....	2.00
Culls, lambs.....	75

SAUSAGE CASINGS.

Sheep, imp., wide, per bundle.....	80
Sheep, imp., wide, per keg, 50 bundles.....	\$40.00
Sheep, imp., medium, per bundle.....	80
Sheep, imp., per bundle, narrow.....	44
Sheep, imp., Russian Rings.....	42
Hog, American, in tes. or bbls., per lb., F.O.B. Hog.....	42
Beef, rounds, per set, f. o. b. Chicago.....	12
Beef, rounds, per set, f. o. b. N. Y.....	13
Beef, rounds, per lb.....	2
Beef, bungs, piece, f. o. b. N. Y.....	5
Beef, middles, per set, f. o. b. Chicago.....	25
Beef, middles, per set, f. o. b. N. Y.....	37
Beef, middles, per lb.....	6 1/4
Beef weasands, per 1,000, No. 1's.....	3
Beef weasands, per 1,000, No. 2's.....	3 1/4 @ 3

SPICES.

	Whole.	Ground
Pepper, Sing., white.....	21 1/4	22 1/4
Pepper, Sing., black.....	14	15
Pepper, Penang, white.....	21	22
Pepper, red, Zanzibar.....	18	21
Pepper, shot.....	15	15
Allspice.....	09	12
Coriander.....	06	07
Cloves.....	20	22
Mace.....	53	60

SALTPETRE.

Crude.....	3 1/4 @ 3 3/4
Refined—Granulated.....	4 1/4 @ 4 1/4
Crystals.....	4 1/4 @ 5 1/4
Powdered.....	4 1/4 @ 4 1/4

THE GLUE MARKET.

A extra.....	21
1 extra.....	17
1X moulding.....	15
1X.....	14 1/4
14.....	14
13.....	14
12.....	12
11.....	11
10.....	10
9.....	9
8.....	9

GREEN CALFSKINS.

No. 1 calfskins.....	per lb .14
No. 1 calfskins, buttermilk.....	.12
No. 1 calfskins, 12-14.....	each 1.50
No. 2 calfskins, buttermilk.....	.10
No. 2 calfskins, 12 1/4-14 lb.....	piece 1.80
No. 1 grassers.....	per lb .12
No. 2 grassers.....	per lb .09

No. 1 heavy kips, 18 lb and up.....	piece 1.90
Ticky kips, 18 lb and up.....	piece 1.40
No. 2 heavy kips, 18 lb and up.....	piece 1.65
No. 1 kips, 14-18 lb.....	piece 1.70
No. 2 kips, 14-18 lb.....	piece 1.50
No. 1 grass kips.....	piece 1.50
No. 2 grass kips.....	piece 1.35
Ticky kips.....	piece 1.00
Branded heavy kips.....	piece 1.10
Branded kips.....	piece .90
Branded skins.....	piece .50

GAME.

DRY-PACKED.

Snipe, English, per dozen.....	1.75 @ 2.00
Plover, Golden, per dozen.....	2.50 @ 3.00
Grass, per dozen.....	1.75 @ 2.00

DRESSED POULTRY.

FRESH KILLED.

Turkeys—West'n, young hens, average run.....	18 @ 17
W'n, young toms, medium weights av. run.....	16 @ 16
W'n, young hens & toms, selected.....	15 @ 15 1/4
Old hens.....	15 @ 14
Common.....	12 @ 14
Oapons—Philadelphia, large.....	22 @ 23
Philadelphia, medium weights.....	18 @ 20
Ohio and Indiana, large.....	18 @ 18
Mixed.....	15 @ 17
Small and Sigs.....	13 @ 14
Broilers, Phila., 4 lb. and under to pair, fancy.....	35 @ 40
Pa., 4 lb. and under to pair, fancy.....	35 @ 33
Western, dry-picked, 4 lb. and under to pair, fancy.....	30 @ 25
Chicken—Phila., fey, large, per lb.....	18 @ 19
Phila., mixed sizes, per lb.....	15 @ 17
State and Pa., fancy, per lb.....	15 @ 16
State and Pa., med. sizes, per lb.....	13 @ 14
State and Pa., poor, per lb.....	11 @ 12
Western, dry-picked, large, per lb.....	14 @ 14 1/4
Western, scalded, large, per lb.....	14 @ 14 1/4
Western, dry-picked and scalded, medium sizes.....	12 1/4 @ 12 1/4
Fowls—Ohio & Mich., scalded, per lb.....	14 1/4 @ 15
Western, inferior.....	11 1/4 @ 11 1/4
Squabs—Prime, large, white, per doz.....	53.00
Mixers, per doz.....	2.50 @ 2.75
Darks, per doz.....	1.75 @ 2.00
Fowls and chickens, poor, per lb.....	10 @ 12
Old cocks, per lb.....	10 @ 10

LIVE POULTRY.

Spring chickens, nearby, per lb.....	13 @ 13
Fowls, per lb.....	15 @ 15
Broilers, per lb.....	9 @ 9
Turkeys, per lb.....	15 @ 15
Ducks, average, Western, per pair.....	30 @ 30
Geese, Western, per pair.....	1.00 @ 1.25
Live Pigeons, per pair.....	35 @ 35

FERTILIZER MARKETS.

BASIS, NEW YORK DELIVERY.

Bone meal, steamed, per ton.....	\$23.00 @ 23.00
Bone meal, raw, per ton.....	\$23.50 @ 23.50
Nitrate of soda—future.....	2.05 @ 2.07 1/4
Nitrate of soda—spot.....	2.15 @ 2.25
Bone black, spot, per ton.....	13.50 ch @ 13 1/4
Dried blood, N. Y., 12-13 per cent. ammonia.....	2.55 @ 2.60
Dried blood, West, high grade, fine ground, c. f., N. Y.....	2.55 @ 2.60
Tankage, 9 and 30 p. c., f. o. b. Chicago.....	23.00 @ 23.00
Tankage, 8 and 30 p. c., f. o. b. Chicago.....	18.00 @ 19.00
Tankage, 7 and 30 p. c., f. o. b. Chicago.....	15.00 @ 16.00
Tankage, 6 and 35 p. c., f. o. b. Chicago.....	15.00 @ 16.00
Garbage tankage, f. o. b. New York.....	8.00 @ 9.00
Fish scrap, dried, 11 p. c. ammonia and 15 p. c. bone phosphate.....	20.00 @ 20.00
Wet, acidulated, 6 p. c. ammonia, per ton.....	14.00 @ 15.00
Asotone, per unit, del. New York.....	2.60 @ 2.65
Sulphate ammonia gas, for shipment, per 100 lbs.....	3.30 @ 3.35
Sulphate ammonia gas, per 100 lbs.....	3.30 @ 3.35
Sulphate ammonia bone, per 100 lbs.....	3.10 @ 3.15
So. Carolina phosphate rock, ground, per 2,000 lbs., f. o. b. Charleston.....	6.50 @ 7.75
So. Carolina phosphate rock, undried, f. o. b. Ashley River, per 2,400 lbs.....	3.50 @ 3.75
The same, dried.....	3.75 @ 4.00
POTASHES, ACCORDING TO QUANTITY.	
Kainit, shipment, per 2,400 lbs.....	\$5.95 @ 6.50
Kainit, ex-store, in bulk.....	9.00 @ 10.00
Kieserit, future shipment.....	7.00 @ 7.25
Muriate potash, 80 p. c., ex-store.....	1.50 @ 1.55
Muriate potash, 80 p. c., future shipment.....	1.90 @ 1.90
Double manure salt (40 @ 40 p. c., less than 2 1/2 p. c. chloride), to arrive, per lb. (basis 45 p. c.).....	1.00 @ 1.15
Sulphate potash, to arrive (basis 90 p. c.).....	1.00 @ 1.30
Sylvinit, 24 to 26 p. c., per unit.....	.35 @ .40
S. P.....	.35 @ .40

LIVE STOCK REVIEWS

CHICAGO.

(Special to The National Provisioner from the Bowles Live Stock Commission Company.)

CATTLE.—Receipts of cattle the first three days this week, 52,747, as compared with 46,171 the same period last week, showing an increase of 6,576. Official receipts Monday, 28,864, which was over 2,000 larger than a week ago and 3,000 larger than the corresponding day of last year. The heavy run was a general surprise to the trade, but is accounted for largely to the following facts: The country feed-lots in many localities are now very muddy, and it is almost impossible to keep the cattle from going back in weight. Corn is scarce and high in price and country roads in such shape that it is next to impossible to haul corn where a feeder is running short. These conditions are all tending toward a liberal movement of cattle to market at present, many of which are coming regardless of conditions, and accounts for the large proportion of the short-fed cattle that the killers are complaining about. The proportion of good cattle on Monday was small, and nothing on sale good enough to sell over \$5.60. This price was obtained for 17 steers, averaging 1,546 lbs. Two loads of 1,471-lb. Nebraska cattle sold at \$5.50, and only about 10 loads sold over \$5.25. The market was steady on desirable cattle that sold at \$5 and upwards, this class being in good demand, but the plain and medium cattle ruled dull and generally 10c. lower. Bulk of the medium 1,100 to 1,300-lb. steers sold from \$4.35 to \$4.75. Plain light and short-fed steers sold from \$4 to \$4.25, and inferior killers down to \$3.25. Stockers and feeders in fairly liberal supply at steady prices. Bulk at \$3.60 to \$4.25, and a few sales at \$4.25 to \$4.40—the latter for strong weights of good quality. Native butcher stock was steady at last week's advance, but closed 10c. lower. Receipts Tuesday, 3,883. Market steady. Butcher stock was weak at Monday's closing prices. Choice cows and heifers sold at \$3.85 to \$4.25, and a few fancy heifers up to \$4.50. Most of the good fat grades from \$3.30 to \$3.75, and common to fair beef cows at \$2.85 to \$3.25. Bulls sold largely from \$3.25 to \$3.60, with choice at \$3.75 to \$4. Bolognas, \$2.70 to \$3.10. Canners and cutters, \$1.75 to \$2.90. Veal calves largely \$5.25 to \$5.60, with fancy lots at \$6 to \$6.50. Receipts to-day 20,000. There was a noticeable scarcity of prime steers, and this kind sold readily at steady prices. Others dull and generally 10c. lower.

HOGS.—Receipts of hogs the first three days this week, 100,004, being about 34,000 more than the same period last week. The fluctuations in the market since last Wednesday have been small, and prices to-day are substantially the same as a week ago. Estimated receipts to-day, 44,000. Market 10c. lower than yesterday. Country roads have been in bad shape recently, which has retarded the movement of hogs to market, and it is expected that as soon as the roads dry up there will be a material increase in supplies and a corresponding decline in the market. The average cost price of hogs on the market to-day would be about \$5.43, as against \$5.50 on Monday and \$7.60 a year ago. Mixed packing hogs sold from \$5.20 to \$5.45, largely around \$5.40. Mediums and butcher weights

principally \$5.40 to \$5.50. Heavy packers from \$5.10 to \$5.45, largely around \$5.35 to \$5.40. Choice heavy packers, largely \$5.45 to \$5.60, with tops at \$5.55.

SHEEP.—Receipts of sheep the first four days this week, 60,894, being about 6,000 more than the same period last week. The market Monday was strong and active all around, with prices 15 to 20c. higher, the advance being particularly on good to choice lambs. Yesterday's supply was moderate, and values about steady. To-day's run estimated at 20,000, and the lamb market 10 to 15c. lower than Monday's high time, with sheep selling strong at the highest prices of the season. Choice lambs to-day quotable at \$6 to \$6.10, with a good kind, \$5.65 to \$5.90. Light lambs in right good demand and selling at \$5.25 to \$5.50. Clipped wethers to exporters at 5c. lb. Clippers yearlings wethers, handy-weights, \$4.70. Woolled wethers sold up to \$5.40 on export account. The river markets are well supplied with lambs to-day, and this had a very bad effect on the market here.

ST. JOSEPH

(Special to The National Provisioner.)

Receipts of cattle last week, 8,521; previous week, 11,214; year ago, 9,258. Under light to moderate cattle receipts the fore part of the week and a good general demand, prices advanced 10 to 25c., but owing to adverse conditions at outside points later on part of the above gain was wiped out. Kansas beefs topped the market at \$5.35. Good fat cows and finished handy weight heifers sold 10 to 15c. higher, but other kinds and canners showed no gain. Good thin stock cattle and desirable quality feeders averaging around 1,000 pounds and down sold freely on a firm basis, but common and medium thin cattle and weighty feeders were of slower sale.

Supplies of hogs last week, 22,727; preceding week, 26,319; year ago, 28,370. Under the lighter marketing sellers were enabled to advance prices 10 to 15c., but packers fought the concessions right along. The quality of the offerings was generally good, and the average weight held strong. The tops to-day were made at \$5.30, with the bulk of sales at \$5.17½ to \$5.25.

Offerings in the sheep department last week, 18,552; former week, 26,651; year ago, \$21,640. The demand from all of the buyers was very strong on each day, and prices showed a gain of mostly 15 to 25c. The bulk of the offerings were marketed from Colorado, supplies from Kansas and Nebraska being reduced, as compared with last week. Colorado lambs sold at \$5.90, Colorado yearlings of fair to good kind at \$5.25, Colorado weathers at \$5.15, and Colorado ewes at \$4.90.

KANSAS CITY

(Special to The National Provisioner.)

CATTLE.—Receipts this week were 31,000; last week, 28,100; same week last year, 27,500. The supply of beef cattle has been somewhat ahead of the demand this week, resulting in a loss of 15 to 25c. Nice light weights have not lost that much, but are a little lower. The top price is 5c. The Eastern demand has been slack for export weights. Cows and heifers continue to sell better than anything, and are steady for the week at \$3.20 to \$4.30. Stockers and feeders have been affected adversely by disappointing beef steer markets, and are 20 to 30c. lower than ten days ago. Bulls and veal calves are steady.

HOGS.—Receipts this week were 36,000; last week, 28,500; same week, last year, 33,800. Hog prices advanced up to Wednesday, but the market opened that day lower, and the decline was even more on Thursday on heavy receipts and indications, deduced from improvement in quality, that the spring hog crop will be heavy. On Friday, however, prices were up again, particularly light

weights, which have been steadily gaining on the heavy weights. The top was \$5.22½; bulk of sales, \$5 to \$5.20.

SHEEP.—Receipts this week were 18,800; last week, 17,300; same week last year, 20,300. Good mutton markets have been the rule all the week, and the market ends this week about as it began, with possibly some weakness in lambs. The quality has not averaged as good this week as usual. The first spring lambs of the season put in their appearance and sold higher than for two years, at 14c. per pound. A few lambs bring from \$5 to \$5.75. Ewes sell up to \$4.75, and wethers at \$5.

HIDES are slightly higher. Green salted, 7¼; side brands over 40 lbs., 7¼; under 40 lbs., 6½; bulls and stags, 6½; uncured, 1c. less. Glue, 4c.

Packers' purchases this week:

	Cattle.	Hogs.	Sheep.
Armour	4,360	11,321	5,494
Cudahy	3,391	7,058	1,875
Fowler	2	.....	.....
Ruddy	779	163	315
Schwarzschild	3,294	5,758	3,373
Swift	5,240	6,672	6,984

CATTLE SLAUGHTERED.

Special reports to The National Provisioner show the number of cattle slaughtered at the following centers for the week ending March 26:

Chicago	32,190
Omaha	16,919
Kansas City	13,703
St. Joseph	8,521
Cudahy	359
Sioux City	5,965
Wichita	314
Cincinnati	3,141
New York and Jersey City	7,109
Detroit	1,149
Buffalo	7,550
Denver	683

HOGS SLAUGHTERED.

Special reports to The National Provisioner show the number of hogs slaughtered at the following centers for the week ending March 26:

Chicago	55,352
Omaha	33,602
Kansas City	26,828
St. Joseph	22,726
Cudahy	5,327
Sioux City	975
Ottumwa	3,663
Cleveland	7,750
Cedar Rapids	5,480
Wichita	7,867
Nebraska City	3,413
Bloomington	345
Cincinnati	7,966
Indianapolis	11,342
New York and Jersey City	35,401
Detroit	4,121
Buffalo	28,240
Denver	2,084

SHEEP SLAUGHTERED.

Special reports to The National Provisioner show the number of sheep slaughtered at the following centers for the week ending March 26:

Chicago	60,074
Omaha	25,539
Kansas City	16,171
St. Joseph	18,552
Cudahy	389
Sioux City	228
Wichita	27
Cincinnati	1,795
New York and Jersey City	22,190
Detroit	2,122
Buffalo	43,800
Denver	1,832

NEW YORK LIVE STOCK.

WEEKLY RECEIPTS TO MARCH 28, 1904.

	Beaves.	Cows.	Calves.	Sheep.	Hogs.
Jersey City.....	1,525	1,882	18,125	14,546	
Sixtieth street.....	232	53	5,406	9,108	
Fortieth street.....					17,579
Lehigh Valley.....	5,235				3,366
Weehawken.....	970		1,270		
Scattering.....	982	62	72	41	

Totals.....	8,817	117	7,160	23,604	35,491
Totals last week.....	9,862	119	5,740	21,247	34,121

WEEKLY EXPORTS TO MARCH 28, 1904.

	Live cattle.	Live sheep.	Qrs. of beef.
Schwarzschild & S., Sa. Victorian.....	400		
Schwarzschild & S., Sa. Mesaba.....	310		3,000
Schwarzschild & S., Sa. Idaho.....	145		
J. Shamburg & Son, Sa. Victorian.....	400	1,270	
J. Shamburg & Son, Sa. Mesaba.....	310		
J. Shamburg & Son, Sa. Idaho.....	260		
J. Shamburg & Son, Sa. Parima.....		10	
Swift & Co., Sa. Cedric.....			1,100
Morris Beef Co., Sa. Victorian.....			2,800
Morris Beef Co., Sa. Cedric.....			3,000
Armour & Co., Sa. Victorian.....			200
Armour & Co., Sa. Cedric.....			1,800
G. H. Hammond Co., Sa. Victorian.....			2,250
Cudahy Packing Co., Sa. Campana.....			1,750
L. S. Dillenback, Sa. Uller.....			125

Total exports.....	1,825	1,405	15,400
Total exports this week.....	2,699	2,282	15,900
Boston exports this week.....	650	1,000	4,500
Baltimore exports this week.....	1,447	2,258	966
Philadelphia exports this week.....	358	170	1,200
Portland exports this week.....	1,082	1,062	
Newport News exports this week.....	1,195		
St. John exports this week.....	774		
To London.....	2,858	170	3,000
To Liverpool.....	3,485	5,526	19,066
To Glasgow.....	621		
To Hull.....	60		
To Cardiff.....	237	904	
To Bermuda and West Indies.....		135	
Totals to all ports.....	7,281	6,435	22,066
Totals to all ports last week.....	12,602	12,176	28,968

RECEIPTS AT CENTRES.

SATURDAY, MARCH 26, 1904.

	Cattle.	Hogs.	Sheep.
Chicago.....	300	5,000	2,000
Kansas City.....	160	3,000	
Omaha.....	125	4,000	500
St. Louis.....			

MONDAY, MARCH 28, 1904.

Chicago.....	28,000	32,000	22,000
Kansas City.....	7,000	5,000	3,000
Omaha.....	4,000	5,000	7,000
St. Louis.....			

TUESDAY, MARCH 29, 1904.

Chicago.....	5,000	22,000	18,000
Kansas City.....	12,000	9,000	5,000
Omaha.....	6,800	14,000	6,000
St. Louis.....			

WEDNESDAY, MARCH 30, 1904.

Chicago.....	20,000	44,000	20,000
Kansas City.....	7,000	10,000	4,000
Omaha.....	6,000	11,000	5,500
St. Louis.....			

THURSDAY, MARCH 31.

Chicago.....	8,000	48,000	14,000
Kansas City.....	3,000	7,000	2,000
Omaha.....	3,300	9,000	5,000
St. Louis.....			

FRIDAY, APRIL 1.

Chicago.....	1,500	24,000	5,000
Kansas City.....	1,000	5,000	1,000
Omaha.....	1,700	6,500	1,000
St. Louis.....	1,600	7,500	1,500

CHEMICALS AND SOAPMAKERS' SUPPLIES.

74% Caustic Soda at \$1.80 to \$1.85 for 60%.	
76% Caustic Soda at \$1.85 to \$1.90 for 60%.	
60% Caustic Soda at 2c. per lb.	
98% Powdered Caustic Soda at 3c. per lb.	
58% Pure Alkali at 90c. to 1c. for 48%.	
48% Carbonate Soda Ash at \$1.10 per 100 lbs.	
Borax at 8c. per lb.	
Talc at 1 1/4c. per lb.	
Palm Oil in casks 6 1/4c. lb., in barrels 6 1/4c. lb.	
Green Olive Oil at 57 to 58c. per gal.	
Yellow Olive Oil at 54c. per gal.	
Green Olive Oil Foots, 5 1/4c. lb.	
Cochin Coconut Oil, 7 to 7 1/4c. lb.	
Ceylon Coconut Oil, 6 1/2 to 6 3/4c. lb.	
Cotton Seed Oil at 38 to 40c. per gal.	
Rosin: M., \$4.00; N., \$4.10; WG., \$4.25; WW., \$4.50 per 280 lbs.	

GENERAL MARKETS.

LARD IN NEW YORK.

Western steam, \$7.15; city steam, \$6.50; refined, Continent, tcs., \$7.40; do., South America, tcs., \$8; do., kgs., \$9; compound, \$6.75.

HOG MARKET, MARCH 31.

CHICAGO.—Receipts, 54,000; 10@15c. lower; \$4.85@5.30.

KANSAS CITY.—Receipts, 6,000; 5@10c. lower; \$4.80@5.10.

OMAHA.—Receipts, 10,500; slow; \$4.90@5.05.

ST. LOUIS.—5@10c. lower; \$4.65@5.45.

INDIANAPOLIS.—Receipts, 3,000; lower; \$5@5.50.

CLEVELAND.—Receipts, 30 cars; slow; \$5.55@5.65.

EAST BUFFALO.—Receipts, 15 cars; opened lower; \$5.80@6.10.

LIVERPOOL.

Liverpool, March 31.—(By cable).—Beef, extra India mess, 65s.; pork, prime mess, western, 65s.; shoulders, 31s. 6d.; hams, s. c., 45s.; bacon, c. e., 34s. 6d.; do., short ribs, 35s. 6d.; do., long clear, light, 37s.; do., heavy, 36s. 6d.; backs, 36s.; bellies, 40s.; tallow, 25s.; turpentine, 43s.; rosin, common, 7s. 5d.; lard, prime western, tcs., 35s. 9d.; do., American refined, 28-lb. pails, 36s.; cheese, white, 49s.; do., colored, 51s.; American steam lard (Hamburg), 50 kilos, 35 1/2; tallow, Australian (London), 27s. 9d.; cottonseed oil, refined (Hull), 19s. 6d.

OLEO AND NEUTRAL LARD.

The oleo business during the week under review has been extremely quiet, with hardly any change in price. Little business done on account of the holidays in Europe, which will last until next Tuesday, and the prospect is for a little more activity during April.

Neutral lard is now at the same price as oleo oil, but is extremely quiet, same as the entire provision list.

THURSDAY'S CLOSINGS.

Provisions.

Chicago receipts of hogs were 54,000, and their prices 10@15c. lower, and estimates for to-morrow 32,000. The day's hog supplies were much more than had been estimated the day before. The products because of the liberal hog receipts were at easier prices early, but rallied, and closed at an advance for the day of 12@15c. for pork, unchanged to 2 points higher for lard and 7 points higher for ribs.

Tallow.

Weekly contract deliveries of city, which were made at 4 1/2c. The general market has not varied from the features in our review, upon another page of this issue.

Oleo Stearine.

Dull and unchanged; 6 1/2c. bid and 6 3/4c. asked.

Cottonseed Oil.

There are hardly any features from those in our weekly review in another column of this issue, except that for the day the tone is even stronger, more because of unimportant offerings; therefore little business going on. New York had prices as follows: 35 1/4c. bid for May, 36c. bid for June, 36 1/4c. bid for July, and 36 3/4c. bid for August, and nothing offered. Sale of 350 bbls. April, 35 1/4c., with that bid and 36c. asked. For crude, in tanks, at the Southeast mills, 28c. is bid and 29c. asked.

COTTONSEED OIL.

(Continued from page 35.)

The sales for the week have been 10 tanks crude, southeast mills, at 28 1/4@28 1/2c., and 15 tanks in Texas at 28c. In New York sales 300 bbls. prime yellow, April delivery, at 35 1/4c., now at 35 1/4c. bid and 36c., asked; 2,400 bbls. do., May delivery, at 35 1/2c.; 1,400 bbls. do., at 35 1/4c., now at 35 1/4c. bid and 36 1/4c. asked; 200 bbls. do., June 36c., now at 36c. bid and 36 1/2c. asked; 2,000 bbls. do., July, at 36 1/2c., now at 36 1/2c. bid and 37c. asked; August at 36 3/4c. bid.

COTTONSEED OIL SITUATION.

(Special Letter to The National Provisioner from Aspegren & Co.)

New York, March 31, 1904.

The market has been decidedly steadier during the past week. Considerable resistance has been shown to further attempts on the part of the leading company to lower the market. There is an improvement in the demand for crude oil on the part of the compound lard makers, who stand ready to buy large quantities if crude declines to 27 1/2@28c.

Some export demand for refined oil has shown up, although only for moderate quantities, and sales have been made both the Mediterranean ports and to the north of Europe. The fact that European buyers are able to use cottonseed oil at present prices is important, and while they are not yet ready to buy more than moderate quantities, they might prove to be extensive buyers if the market should remain steady.

The domestic trade seems to be willing to take hold of prompt oil at around 35 1/2c. Futures have also been taken up quite freely by speculators, and one of the leading companies who has been offering July oil freely found itself taken up on about 15,000 bbls. June and July oil on Friday and Saturday. Another leading concern was offering near-by deliveries and also found considerable demand for same. Since then both companies have withdrawn from the market as sellers. All these facts have naturally given the market a steadier tone, and prices for refined oil have recovered about 1/4 to 1/2c. from the lowest price. We advised caution in our last market letter, as the decline seemed too heavy in view of conditions. The present steadiness and better tone is therefore not surprising.

As regards crude oil, there is very little offering on the decline, but buyers are holding off, still hoping to get in some crude at lower figures from mills who may be carrying more than they like to have in stock. It is doubtful, however, whether the mills will be willing to shade prices further. We quote to-day as follows:

Prime summer yellow cottonseed oil, April, 35 1/2c. sales; do. May, 35 1/4c. sales; do. June, 36 1/4c. sales; do. July, 36 3/4c. sales; do. August, 37 1/4c. sales; do. September, 36c. sales; do. October, 35c. sales; do. November, 34c. sales; do. December, 33 1/2c. sales; prime winter yellow cottonseed oil, 38c.; prime summer white cottonseed oil, 38c.; Hull quotation of cottonseed oil, 19s. 7 1/2d.; prime crude oil in tanks in the Southeast, 28@28 1/2c.; do. in the Mississippi Valley, 28@28 1/2c.; do. in Texas, 27 1/2@28c.



RETAIL SECTION



BUTCHER SUES POOLROOM MAN.

A suit for \$955 damages has been filed in the Superior Court at Chicago against Mont Tennes by Albert Ashbach, 1306 Wolfram street, who alleges that he lost his butcher business at that number because of his losses in playing races in Tennes' place at 143 North Clark street.

LABOR WAR IN OAKLAND.

The journeymen butchers of Oakland, Cal., remain locked out, and the lines are still sharply drawn between the workmen on the one hand and the employing butchers backed by the wholesalers on the other. While many of the markets are still open, delivery is desultory in many cases, and in some cut off altogether. The drivers as well as the blockmen are members of the union, which has a roll-call of some 218 members.

CONNECTICUT MAY SECEDE.

The Connecticut Retail Butchers' Association, through its local branches, is considering the advisability of withdrawing from the National association. The contention of those who are in favor of withdrawing from the national organization is that the Connecticut butchers are putting a lot of money into the national treasury and getting absolutely no benefit from it. The Connecticut association stands among the first in the organization of the retail butchers in the country, and its action will have a large influence.

DOG TRAFFIC AT BUDAPEST.

Says a Vienna telegram to the London Mail: For some weeks past numerous complaints have been made to the Budapest police of the disappearance of valuable dogs. Detectives at last discovered that the animals had been stolen and slaughtered by a man named John Medck, who sold the flesh to poor people as mutton. In this way he had disposed of about 100 valuable animals, including mastiffs and terriers. Medck was taken in the act of skinning a large Newfoundland dog, while in pots on the range a number of fox terriers were cooking.

NO HARM TO SAY "FAIR."

A decision has been handed down at Los Angeles, Cal., in the case of the Sentous Packing Company against the trades councils, in which the former asked for an injunction against the latter, restraining them from issuing certain circulars in which the packing concern was designated as "fair." The Court denies the injunction; the Court holds that the unions were not willing to "cut off their noses to spite their faces," and therefore left an avenue open by which they could obtain their

share of family meat. This was one of the reasons, says the Court, for including the company in the "fair" list, and not for the purpose of damaging the concern.

TO ENTERTAIN BUTCHERS AT FAIR.

The Master Butchers' Association of America is making elaborate preparations to entertain its members and friends at the St. Louis World's Fair. The eighteenth annual convention of the association will be held at St. Louis during the week of July 25th, and an international butcher congress will take place at the same time. A gathering of representative master butchers of all countries is expected. The national officers and the St. Louis Association, which is the strongest in the world, and has a membership of nearly 1,500, will entertain delegates and friends at the homes of local members, so that no visitor need fear lack of accommodation or extortion in hotel rates. Secretary John H. Schofield of the National Association, is waging a vigorous campaign for a record attendance.

LARGEST FROG-LEG MARKET

In two adjoining American cities is located the largest frog-leg market in the world. Frogs are found in other states than Minnesota, but nowhere else in the United States has the industry achieved such proportions as in the region surrounding the twin cities of St. Paul and Minneapolis. The total receipts last year from the frog catchers of the State exceeded 500,000 dozen, requiring the slaughter of no less than 5,000,000 frogs. Five years ago no frogs were shipped out of Minnesota. Now the business amounts to upwards of \$100,000 a year.

Minnesota-caught frogs are in great demand in New York and other prominent cities, and the demand is constantly increasing. It is expected that the industry will spread to the export trade and American frog-legs are likely soon to be shipped to France and other countries where the delicacy is appreciated. The frog-legs are all shipped by express, packed in ice. In the cold storage houses in the chief cities there are frog-legs held as a reserve emergency.

CLIMBING PIGS.

Pigs are the most valuable assets of the cottagers of Lower Caversham, says the London Meat Trades' Journal. In view of almost annual floods they are taught from early youth to walk upstairs, and in many of the cottages smiling "Berkshire bacon" can be seen surveying the floods from upper windows. In our opinion, says the London writer, pigs are a valuable asset to anybody in whatever shape or form, dead or alive. Rarely is any money lost on the porker.

LOCAL AND PERSONAL.

A new market has been opened at Caldwell, Tex., by R. Struve.

Doing & Stanley have opened a new market at Conneautville, Pa.

Alfred Stowell has opened the depot market at Cooperstown, N. Y.

Stepp's butcher shop, at Santa Rose, N. M., has been destroyed by fire.

W. Solin has moved his market at Clinton, Mass., to No. 94 Main street.

Corbin & Sankey are erecting a building for a new market at Volant, Pa.

Martin Raber has taken possession of the Scotia market, at Scotia, N. Y.

L. D. Simonds has sold his market, at Binghamton, N. Y., to James W. Gadsby.

James Lake has opened a new market on South Michigan street, South Bend, Ind.

Thos. S. McCann has purchased an interest in the B. C. Wiseman market, at Salem, O.

David O. Edgar, a Syracuse butcher, has been arrested on a charge of selling meat on Sunday.

Chester A. Hayes has bought his partner's interest in the Hayes & Fogle market, at Barnesville, O.

The Eastern and Western Master Butchers' Association, at New Haven, Conn., have decided to amalgamate.

Louis Baum has purchased the market of Charles Goeppinger, at Eleventh and Lincoln streets, Portsmouth, O.

The Sartorius Provision Company, at No. 2734 Arsenal street, St. Louis, lost its smoke house by fire last week.

The secret of the co-operative meat market, which was started at Two Rivers, Wis., is out. There are 105 stockholders, and they are all Socialists.

The city government at Columbus, Miss., has decided to erect a city market, in which all butchers and produce peddlers will be compelled to locate.

The city authorities and the market commission of Rochester are "up in the air" over the question of a new market site. Site after site has been recommended and turned down because of protests from somebody or other, and now hope has about been given up of getting a public market.

Edward M. Adams, who conducts a market at No. 1023 Chestnut street, Reading, Pa., has bought the market of E. B. Strohecker, on North Ninth street, and will combine it with his own.

A fire which started in the National meat market, at Faulkton, S. D., destroyed the best part of the town's business section last week. All the buildings were of wood, and will at once be replaced by brick.

William T. Van Buren, of Kingston, N. Y., proprietor of the oldest meat market in that part of the State, the business having been established by his father in 1833, died at his home in that city last week.

The St. Paul, Minn., Meat Dealers' Association has decided to discontinue the use of trading stamps, and its entire membership will observe the order. A plan for regulating credits and disposing of "dead beats" has also been adopted.

The retailers of St. Paul are endeavoring to secure the adoption of a city ordinance imposing a license fee of \$300 per year on trading stamp concerns, and a \$100 license on merchants who use them. The stamp companies are fighting the measure in every way possible.

The Cleveland, O., Meat Cutters' Union has elected the following officers: President, Jacob Weber; vice-president, Albert Hart; recording secretary, Antone Weinerth; financial secretary, George Telzrow; sergeant-at-arms, Clifford Freeman; business agent, F. C. Gerham.


In a meeting with the Master Butchers' Association, the Meat Cutters' Union, of Detroit, Mich., indorsed the agitation for the Sunday closing movement. A resolution was jointly passed by the two committees asking members to close their shops at 6 o'clock during the week and at 9 o'clock Saturday evenings. An effort will later be made to close butcher shops at 6 o'clock even Saturday evenings.

NEW ARMOUR BRANCH MANAGER.

William C. Lertz has been appointed to succeed Francis P. Conroy as manager of the branch house of Armour & Co. in Jacksonville, Fla. Mr. Lertz has been in Atlanta, Ga., as division superintendent of the Armour Company, having under his jurisdiction Atlanta, Birmingham, Chattanooga and other branches as sub-agencies in that territory. He has been connected with the company for the past sixteen years, and in that time has filled the place of division superintendent in Georgia, Alabama, Arkansas, Mississippi, Louisiana, Texas, Indian Territory and Oklahoma. Mr. Conroy, the retiring manager, had charge of both the branch house of Armour & Co. and the Armour Fertilizer Works. Mr. Lertz will succeed to the management of the meat house, and George W. Sanders has been named to take charge of the fertilizer works. On account of the growing business, it was thought wise to appoint a manager for the fertilizer factory, with a separate office.

See page 48 for bargains in your line in the "For Sale" department.

This Mark




upon a butcher's steel is a mark of quality. Do you want a tool you don't have to take care of? One you can drive into the hardest bone you meet? Look for the name

PLUMB

and you will get it. We stand back of our cleavers, choppers, splitters and killing axes. If they don't suit you, they don't suit us.
Can you do better than this?

FAYETTE R. PLUMB, Incorporated,
PHILADELPHIA, PA., U. S. A.

May be bought of the following:
Koch Butchers' Supply Co., Kansas City, Mo.; Cincinnati Butchers' Supply Co., Cincinnati, O.; G. V. Brecht Butchers' Supply Co., St. Louis, Mo.; Bernard Gloeckler, Pittsburg, Pa.



GILDING ON MARBLE.

To gild letters on marble, apply a coating of size first, then apply successively several coats of size thickened with whiting until a good face is produced. Let each coat dry and rub it down with a fine glass paper before applying the next. Then go over the marble thinly and evenly with gold size. Apply the gold leaf and burnish with an agate. The gold leaf must be applied several times to give a good effect.

BRAIN SAUSAGE.

To make a very palatable brain sausage, mix with the brains of two calves, which have been freed of all skin and washed clean, one pound of lean and one-half pound of fat pork, previously chopped fine. Season with five raw, grated onions, one ounce of salt, and one-half ounce of ground pepper. This mixture is stuffed in beef rounds and boiled in clear water for five minutes. They should then be kept in a cool place until ready for use.

GREASE FOR BOOTS.

A grease for boots which is said to prevent sore feet entirely is made of 4 parts of lard, 4 parts of olive or cottonseed oil and 1 part of raw rubber (caoutchouc). These ingredients are melted together over a slow fire. Having moistened the sole of the boot with water, the boot is warmed in a stove or before a fire, and smeared over with the compound. The boot is said to become soft, pliable, shining, waterproof and even more durable.

RECIPE FOR GOTHIA SALAMI.

The acknowledged season for this delicate sausage lasts from October until April, and reaches its climax in the latter part of its season. Eighteen pounds of beef and as much lean pork are thoroughly disintegrated in a meat cutter, or better, on the block. To the well-mixed meat is added 8 ounces of salt, 3 ounces of ground pepper, 5 ounces of whole pepper, 5 ounces of sugar, 3 ounces of saltpetre, and, when needed, 1½ ounces

of boric acid. Eighteen pounds of fat bacon, which has been previously cut into thin slices, is next added, and the whole mass worked on the block until the bacon appears in size of cubes. The mass is filled into calf bladders, which must be scrupulously clean and which are rubbed in salt after being filled.

These sausages are allowed to remain in the salt for ten days, and are then dried in a cool air draught and smoked afterwards for ten days more. Further treatment is identical with that of summer sausage. When properly handled they will bear considerable heat without damage.

NATURAL ICE IS DOOMED.

The winter gathering of natural ice for refrigeration uses in summer is steadily falling to small proportions, in consequence of the late improvements devised in processes for artificially reducing temperature and manufacturing ice. In the state of Maine, where in former years the harvesting of ice for market in more southern latitudes was carried to enormous proportions, the total quantity cut during last winter, which embraced perfect conditions for the securing of a large crop, was but 485,000 tons, against 700,000 tons gathered in the winter of 1902-3.

The advantages offered by chemistry and modern machinery for the production of ice and the perfect control of temperature at whatever degree desired, when and wherever needed, irrespective of climatic conditions, renders their mechanical acquirements cheaper than can be obtained from natural ice when transportation from remote districts of storing and the great wastage of original bulk through melting is taken into consideration. In all manufacturing necessity for cooling and for maintaining uniform degrees of temperature, as well as certainty of control of such conditions, together with their greater economy, present systems of artificial refrigeration are crowding Nature out of the field of competition and reducing the latter to chiefly local value.

